

EXHIBIT A

Part 1

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

ALPHA PHI ALPHA FRATERNITY
INC., et al.,

Plaintiffs,

vs.

BRAD RAFFENSPERGER, in his
official capacity as Secretary of State of
Georgia.

Defendant.

1:21-cv-5337-SJC

REBUTTAL DECLARATION OF WILLIAM S. COOPER

WILLIAM S. COOPER, acting in accordance with 28 U.S.C. § 1746,
Federal Rule of Civil Procedure 26(a)(2)(B), and Federal Rules of Evidence 702
and 703, does hereby declare and say:

1. My name is William S. Cooper. As a private consultant, I serve as a demographic and redistricting expert for the Plaintiffs. I filed a declaration in this

lawsuit on January 7, 2022, a renewed version of which was filed on January 13, 2022.¹

2. I file this declaration to respond to assertions made in the Defendant's Opposition to Plaintiff's Motion for a Preliminary Injunction (the "Opposition Brief"), as well as the Declaration of John B. Morgan, dated January 18, 2022, that was submitted along with it.

I. INCUMBENT PAIRINGS

3. Mr. Morgan in his Declaration discounts various incumbent pairings caused by the 2021 Senate and House Plans because the paired incumbents purportedly have decided not to run for reelection. However, the Georgia Redistricting Guidelines do not indicate that an incumbent pairing does not count where an official has expressed some future intention not to seek reelection.

4. Mr. Morgan states that he relies on a set of incumbent addresses based on "incumbent databases used by the Georgia General Assembly during the redistricting process," which are different from the publicly available set of

¹ On January 10, 2022, a notice of errata was filed correcting two figures in the January 7, 2022 declaration, as well as their corresponding exhibits. This filing was superseded by the declaration that was filed with Plaintiffs' renewed preliminary injunction motion on January 13.

addresses that I used in my incumbent pairing analysis. On January 19, 2022, I was provided with the incumbent databases and related information used by Mr. Morgan. My revised analysis is as follows:

5. Based on incumbent address information obtained from the State, the following districts in the Illustrative Senate Plan may have incumbent conflicts: 20, 38.

6. Based on incumbent address information obtained from the State, the following districts in the 2021 Senate Plan may have incumbent conflicts: 13, 52.

7. Based on incumbent address information obtained from the State, the following 14 districts in the Illustrative House Plan may have incumbent conflicts: 015, 016, 029, 050, 082, 090, 092, 138, 145, 148, 149, 154, 164, 173.

8. Based on incumbent address information obtained from the State, the following 10 districts in the 2021 House Plan may have incumbent conflicts: 019, 021, 031, 045, 062, 106, 118, 149, 154, 176.

9. Using the new incumbent address information provided by the State creates a number of new incumbent conflicts in the Illustrative House Plan compared to my prior analysis. However, the Illustrative Plans can be modified to resolve many of these incumbent conflicts with relative ease. Indeed, I eliminated more than a half dozen of them in a single afternoon.

10. For example, both Mr. Morgan’s Declaration and the Opposition Brief state that, using the incumbent databases used by Mr. Morgan and provided to me on January 19, 2022, the Illustrative Senate Plan pairs Sen. Horacena Tate and Sen. Donzella James in Illustrative Plan District 38. However, with a minor swap of district lines between Illustrative Senate Districts 35 and 38, and without splitting any new counties, I was able to unpair those two incumbents. Similarly minor adjustments allowed me to resolve half of the conflicts in the Illustrative House Plan.

11. Maps of these revised plans illustrating the resolution of these incumbent conflicts, which I will refer to as Illustrative Senate Plan II and Illustrative House Plan II, are included as **Exhibit A-1**. Tables showing statistical information regarding the Illustrative II Plans are included as **Exhibits A-2** (Senate) and **Exhibit A-3** (House) and show that the Illustrative II Plans retain the same number of majority-BVAP districts—19 in the Senate and 54 in the House. Images showing each of the 56 Senate Districts and 180 House Districts in the Illustrative II Plans are included at **Exhibit A-4** (Senate) and **Exhibit A-5** (House). Splits reports confirming that the Illustrative II Plans split no new counties and only a small number of additional VTDs are included at **Exhibit A-6 (Senate)** and **Exhibit A-7 (House)**.

12. Based on the incumbent address information obtained from the State, the following districts in Illustrative Senate Plan II may have incumbent conflicts: 20, 38. However, under Mr. Morgan's approach of discounting certain incumbent pairings when one or more of the paired incumbents has stated that they do not plan to seek re-election, and relying solely on the list of retiring legislators set forth in Mr. Morgan's Declaration, which includes Sen. Jen Jordan, this number of pairings is further reduced to a single one, District 20.

13. Based on incumbent address information obtained from the State, the following districts in the Illustrative House Plan II may have the following 7 incumbent conflicts: 016, 129, 138, 140, 149, 154, 173. Moreover, under Mr. Morgan's approach of when certain incumbent pairings because one or more of the paired incumbents has stated that they do not plan to seek re-election, and relying solely on the list of retiring legislators set forth in Mr. Morgan's Declaration, which includes Rep. Susan Holmes, this number of pairings is further reduced to the following 6 conflicts: 016, 129, 138, 140, 149, 154, 173.

14. I have provided the block equivalency files for the Illustrative II Plans to counsel for transmission to Defendant.

II. CORE CONSTITUENCY ANALYSIS

15. Mr. Morgan states in his Declaration that he ran core constituency reports comparing the Illustrative Senate and House Plans with the 2021 Senate and House Plans, concluding that, with one exception, no two districts in the Illustrative and 2021 Senate and House Plans are exactly alike. There are several flaws with this approach.

16. For one, Mr. Morgan’s the analysis shows that most districts are largely overlapping—there is 65.3% overlap on average in the Senate, and 61.4% in the House. Mr. Morgan’s assertion in paragraph 25 of this Declaration that there is “almost no geography in common between the plans” is thus flatly untrue.

17. In any case, the application of core constituency analysis here does not make sense. Georgia’s redistricting guidelines do not contain a maintenance-of-existing-district-cores requirement. Nor in any event would it make sense to ask whether the Illustrative Plans maintain the cores of the 2021 Plans, as both are new plans that have never been in effect before.

18. Nor is it particularly surprising that numerous districts in the Illustrative Plans are different from those in the 2021 Plans. In order to remedy vote dilution and to adhere to traditional districting principles such as respecting communities of interest, the Illustrative Plans include additional Black-majority districts in multiple

areas of the State. Georgia requires its legislative districts to comply with a stringent, 1% limitation on population deviations (and a similarly stringent 1.5% for the State House). As a result, even small changes can have ripple effects across the map.

19. In my opinion, the Illustrative Plans could likely be modified to bring them closer to the 2021 Plans in many areas (though I do not believe doing so would necessarily advance any traditional districting principles or otherwise be particularly desirable or necessary).

III. ADDITIONAL SPLIT REPORTS

20. In addition to the County and VTD Split Reports, which are discussed in Mr. Morgan's Declaration, I have produced municipality split reports.

21. **Exhibit B-1** contains a municipality split report generated by Maptitude for all districts in the Illustrative Senate Plan. See also **Exhibit B-2** (2014 Benchmark Senate Plan) and **Exhibit B-3** (2021 Senate Plan).

22. **Exhibit C-1** contains a municipality split report generated by Maptitude for all districts in the Illustrative House Plan. See also **Exhibit C-2** (2015 Benchmark House Plan) and **Exhibit C-3** (2021 House Plan).

23. Municipality splits are within the norm for a typical legislative plan. The table in **Figure 1** summarizes municipality splits under the various plans.

Figure 1

**Municipality Splits –
Illustrative versus 2014/2015 Benchmark and 2021 Plans**

	City/Town Splits (Populated)
Illustrative Senate Plan	204
2014 Benchmark Senate Plan	235
2021 Senate Plan	203
Illustrative House Plan	436
2015 Benchmark House Plan	410
2021 House Plan	460

24. I have also produced and reviewed split reports for U.S. Census-recognized metropolitan and micropolitan statistical areas (CBSAs). The Illustrative Senate Plan splits 16 CBSAs and the 2021 Senate Plan splits 19. The Illustrative House Plan splits 31 CBSAs and the 2021 House Plan splits 29.

25. With respect to both municipality and CDSA splits, the Illustrative Plans are on par with the 2021 Plans.

IV. COMPACTNESS SCORES

26. Mr. Morgan acknowledges that the Polsby-Popper and Reock compactness scores of the Illustrative and 2021 Plans are similar overall.

27. Mr. Morgan states that certain individual districts in the Illustrative Plans are significantly less compact than those in the 2021 Plans. However, Mr. Morgan then goes on to simply compare districts by their numbering (i.e., Illustrative House District 153 versus 2021 House District 153), even though the numbering for geographically corresponding districts does not always match up across the two plans (and indeed, does not match up for a number of the districts listed in Mr. Morgan's Chart 5).

28. In any event, the individual Polsby-Popper and Reock scores for all of the Illustrative Senate and House Districts listed in Mr. Morgan's Chart 5 are well within acceptable parameters for compactness. Indeed, to the extent there is an appropriate comparator, many of the comparable districts in the Illustrative Plans score the same or better than those in the 2021 plan. For example, Illustrative Senate District 17 scores better on both Polsby-Popper and Reock than 2021 Senate Plan District 17.

29. Notably, there are no districts that fall below a .15 Reock score or a .10 Polsby-Popper score in either of the Illustrative Plans. In contrast, the 2021 House Plans contain districts that dip as low as a .13 Reock score and a .09 Polsby-Popper score.

V. ILLUSTRATIVE DISTRICTS

30. In the Opposition Brief, Defendant states that the districts in the Illustrative Senate and House Plans are not drawn according to traditional redistricting principles. However, and as I said in my initial Declaration, I adhered to those principles in drawing the Illustrative Senate and House Plan districts at issue.

31. The Opposition Brief discusses Illustrative House Plan District 144, in the Eastern Black Belt area. In drawing that district, and bringing a substantial swath of the historical Black Belt area into a Black-majority district, I was respecting a longstanding community of interest that is defined not just by race but by historical, economic, and cultural factors. In addition, and more specifically, by splitting Baldwin County, I was able to unite the population center of Milledgeville in the same district with eastern Baldwin County and Hancock County, which together form the U.S. Census-recognized Milledgeville micropolitan statistical area, which is defined by regional economics and transportation patterns beyond race. Notably, the State's map also splits Baldwin County, but does so in a way that separates nearly-50%-Black Milledgeville from the Black Belt area and dilutes the voting strength of Black voters there. In my opinion, drawing Milledgeville

into Illustrative House District 144 was consistent with traditional districting principles.

32. Also notably, because of Milledgeville's bizarre shape, drawing the city into Illustrative House District 144 also resulted in approximately 12 additional VTD splits—a result that highlights the at-times arbitrary nature of VTD geography.

33. The 2021 House Map also diluted the voting strength of Black voters in Eatonton, a rural county seat that is almost 60% Black. Drawing Eatonton into Illustrative House District 144 remedied the vote dilution problem there and united members of a community of interest.

34. The Opposition Brief also discusses Illustrative Senate Plan District 23, in the Eastern Black Belt area, which it characterizes as reaching from Augusta to Warner Robins. However, that swath of predominantly rural counties is precisely where I have identified the Eastern Black Belt region, a significant community of interest. Indeed, the greater Black Belt area stretches from Augusta to Albany, including in the area around Warner Robins. Notably, and as described in my initial Declaration, that swath of counties also overlaps with and emanates from the Central Savannah River Area, a designated region according to Georgia's own Department of Community Affairs.

35. The counties and municipalities that were drawn together in the relevant Illustrative Senate and House Districts also share socioeconomic commonalities, which are notable in the American Community Survey (ACS) data that was included as part of Exhibit CD to my initial Declaration.

36. Illustrative Senate District 28 roughly corresponds to 2021 Senate Plan District 16. Illustrative Senate District 28 includes parts of Fayette, Spalding, and Clayton counties., whereas 2021 Senate Plan District 16 includes parts of Fayette and Spalding Counties, and all of Pike and Lamar Counties.

37. The counties within Illustrative District 28 share certain socioeconomic characteristics that make them similar to one another. For example, a similarly significant proportion of Black residents are in the labor force in Fayette, Spalding, and Clayton Counties (64.3%, 58.2%, and 69.5% respectively). The same trend can be seen among Latino residents across each of these counties.

38. The labor force participation rates Black residents in Pike and Lamar Counties (which are contained within 2021 Senate Plan District 16) are significantly different from the counties contained within Illustrative Senate District 28. For example, the Black labor force participation rates in Pike and Lamar Counties are 51.3% and 48.0% respectively.

39. Illustrative Senate District 17 roughly corresponds to 2021 Senate Plan District 17. Illustrative Senate District 17 includes parts of Henry, Rockdale, and Dekalb counties. 2021 Senate Plan District 17 includes parts of Henry, Newton, and Walton Counties, and all of Morgan County.

40. The counties within Illustrative Senate District 17 share certain socioeconomic characteristics that make them similar to one another. For example, the counties that comprise Illustrative Senate District 17 are similar when educational attainment rates are compared among Black residents across the counties. A similarly significant proportion of Black residents in Henry, Rockdale, and Dekalb counties have received a bachelor's degree or higher (34.5%, 29.2%, and 29.2% respectively).

41. The counties that comprise 2021 Senate Plan District 17 do not share these socioeconomic characteristics. Walton and Morgan Counties are especially different. Walton and Morgan Counties are considerably whiter than Henry County (77.5% and 74.0% White, compared to 47.9% White). Black residents in Walton and Morgan counties are significantly less likely to have received a bachelor's degree or higher than Black residents in Henry County (14.1% and 7.0%, compared to 34.5%).

42. Illustrative Senate District 23 roughly corresponds to 2021 Senate Plan District 23. Illustrative Senate District 23 includes parts of Houston and Richmond Counties, and all of Twiggs, Wilkinson, Baldwin, Hancock, Taliaferro, Washington, Jefferson, Burke, and Jenkins Counties. 2021 Senate Plan District 23 includes parts of Richmond and Columbia Counties, and all of Burke, Jenkins, Screven, Emanuel, Jefferson, Glascock, Warren, Taliaferro, and McDuffie Counties.

43. The counties within Illustrative Senate District 23 also share certain socioeconomic characteristics that make them similar to one another. For example, a similarly significant proportion of Black residents across the Illustrative Senate District 23 counties had incomes that fell below the poverty line (ranging from 20.1% of the Black population to 38.4% of the Black population).

VI. ILLUSTRATIVE HOUSE DISTRICTS

44. Illustrative House District 73 includes parts of Henry, Spalding, and Clayton Counties and Illustrative House District 110 includes parts of Henry and Spalding Counties. The counties within Illustrative House Districts 73 and 110 share certain socioeconomic characteristics that make them similar to one another. For example, and as already noted, a similar proportion of Black residents in

Henry, Spalding, and Clayton counties are in the labor force (71.0%, 58.2%, and 69.5% respectively).

45. Illustrative House District 144 includes parts of Putnam and Baldwin Counties, and all of Wilkinson, Hancock, Taliaferro, and Warren Counties. Illustrative House District 144 also includes the population centers of Milledgeville (Baldwin County) and Eatonton (Putnam County), both rural county seats with significant Black populations, within this new majority-Black district.

46. In addition to being part of the Eastern Black Belt region as discussed already, counties within Illustrative House District 144 share certain socioeconomic characteristics that make them similar to one another. For example, a similarly low proportion of Black residents in the illustrative counties have received a bachelor's degree or higher (ranging from 5.7% to 12.7% of the Black population).

47. Illustrative House District 153 includes parts of Dougherty and Thomas Counties, and all of Mitchell County. In addition to creating a Black-majority district in the Western Black Belt and uniting an established community of interest there, the district unites the areas that comprise the Albany-Thomasville corridor. This economic, cultural, and transportation corridor, which runs along the Historic

Dixie Highway, has been recognized by the Southwest Georgia Regional Commission.²

48. The counties within Illustrative House District 153 also share certain socioeconomic characteristics that make them similar to one another. For example, the proportion of Black residents whose income fell below the poverty level was similar across Mitchell, Thomas, and Dougherty Counties (27.6%, 28.1%, and 29.2% respectively). The Black child poverty rate in those counties is similarly high, ranging between 40.6% and 53.8%.

#

I reserve the right to continue to supplement my declaration in light of additional facts, testimony and/or materials that may come to light.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury of the laws of the United States that the foregoing is true and correct according to the best of my knowledge, information and belief.

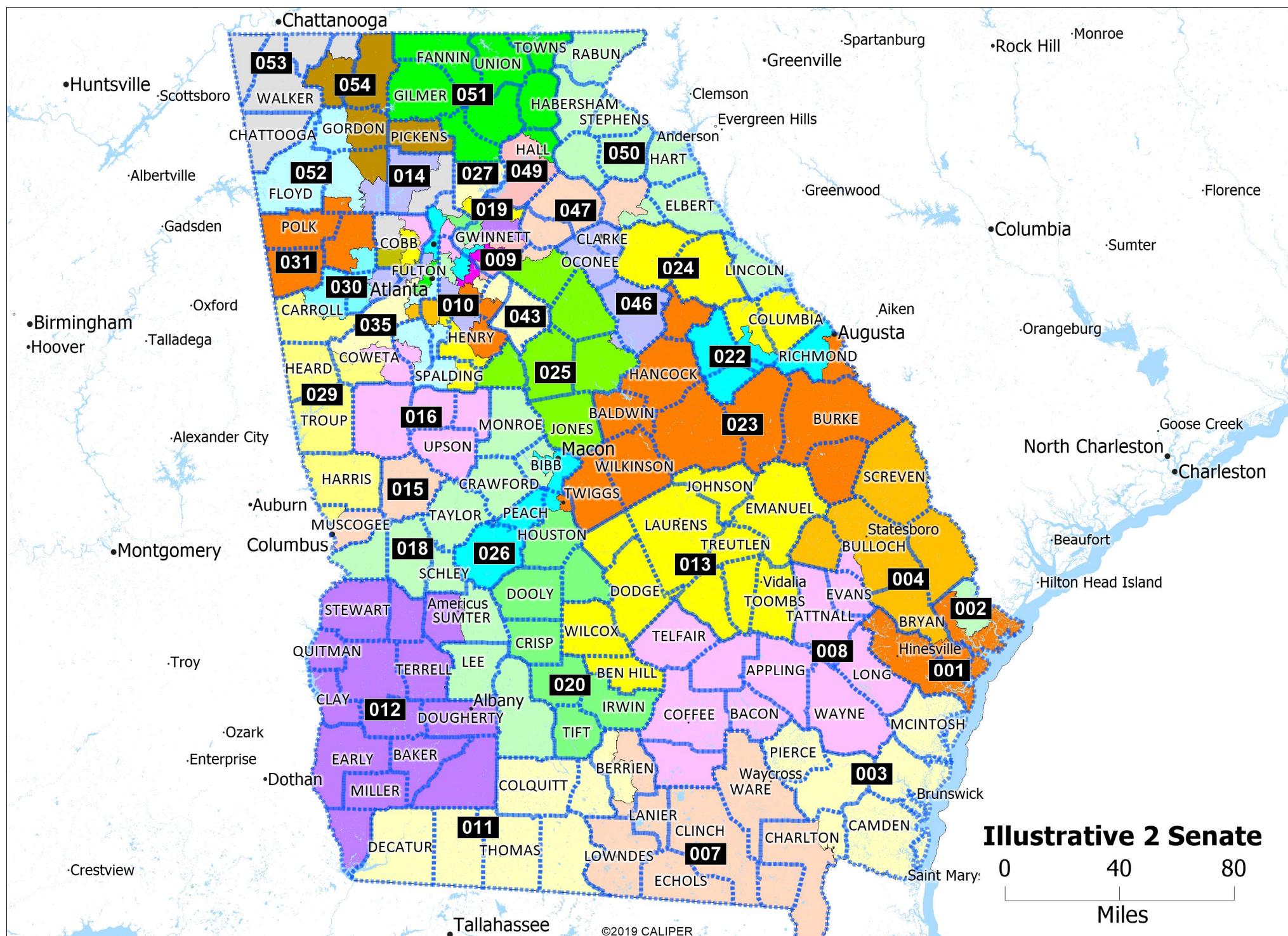
Executed on: January 20, 2022

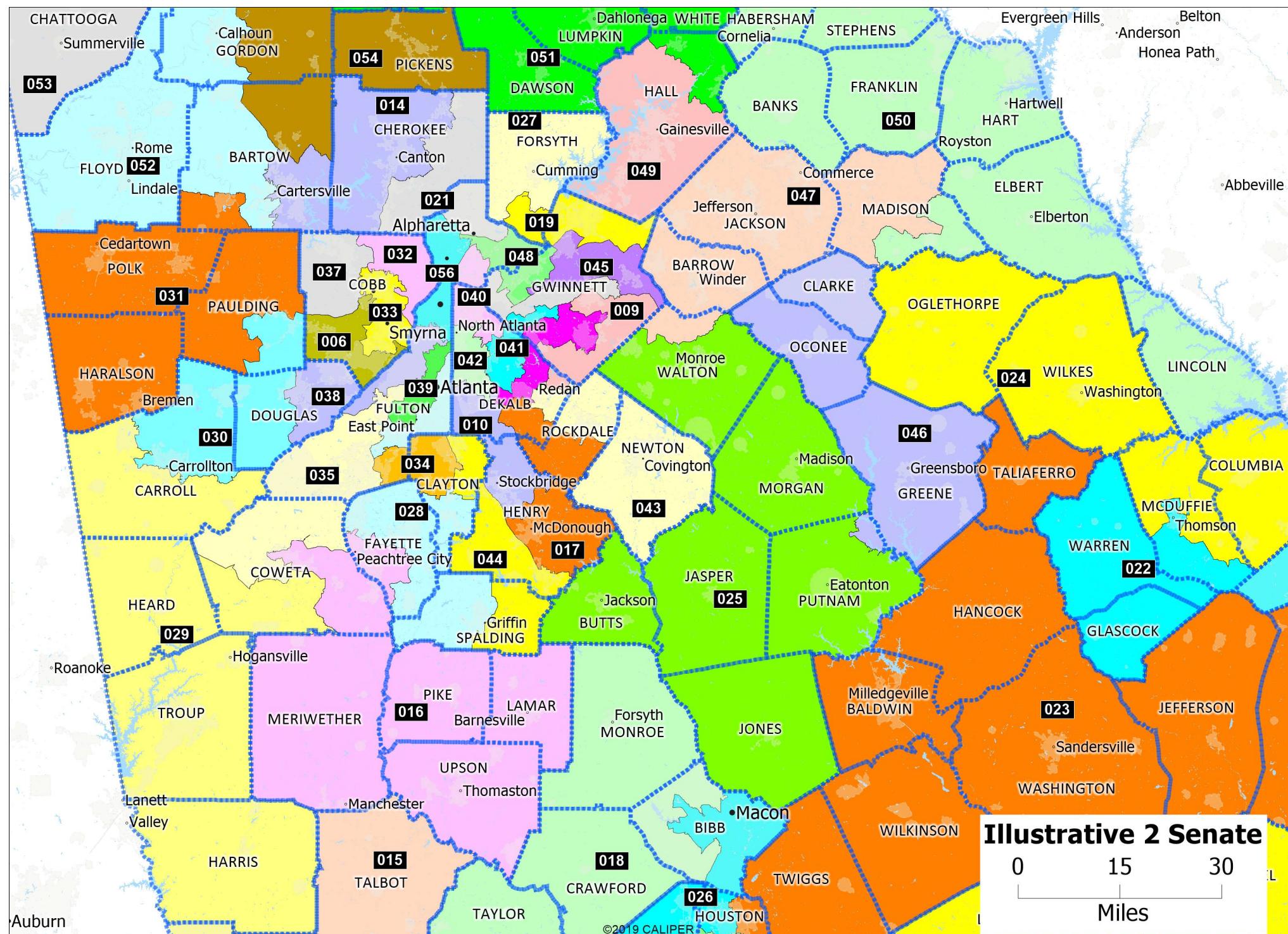
² <http://www.dot.ga.gov/DriveSmart/Travel/ScenicByways/HistoricDixieHwy/HDH-CorridorManagementPlan.pdf>

William Cooper

WILLIAM S. COOPER

EXHIBIT A-1

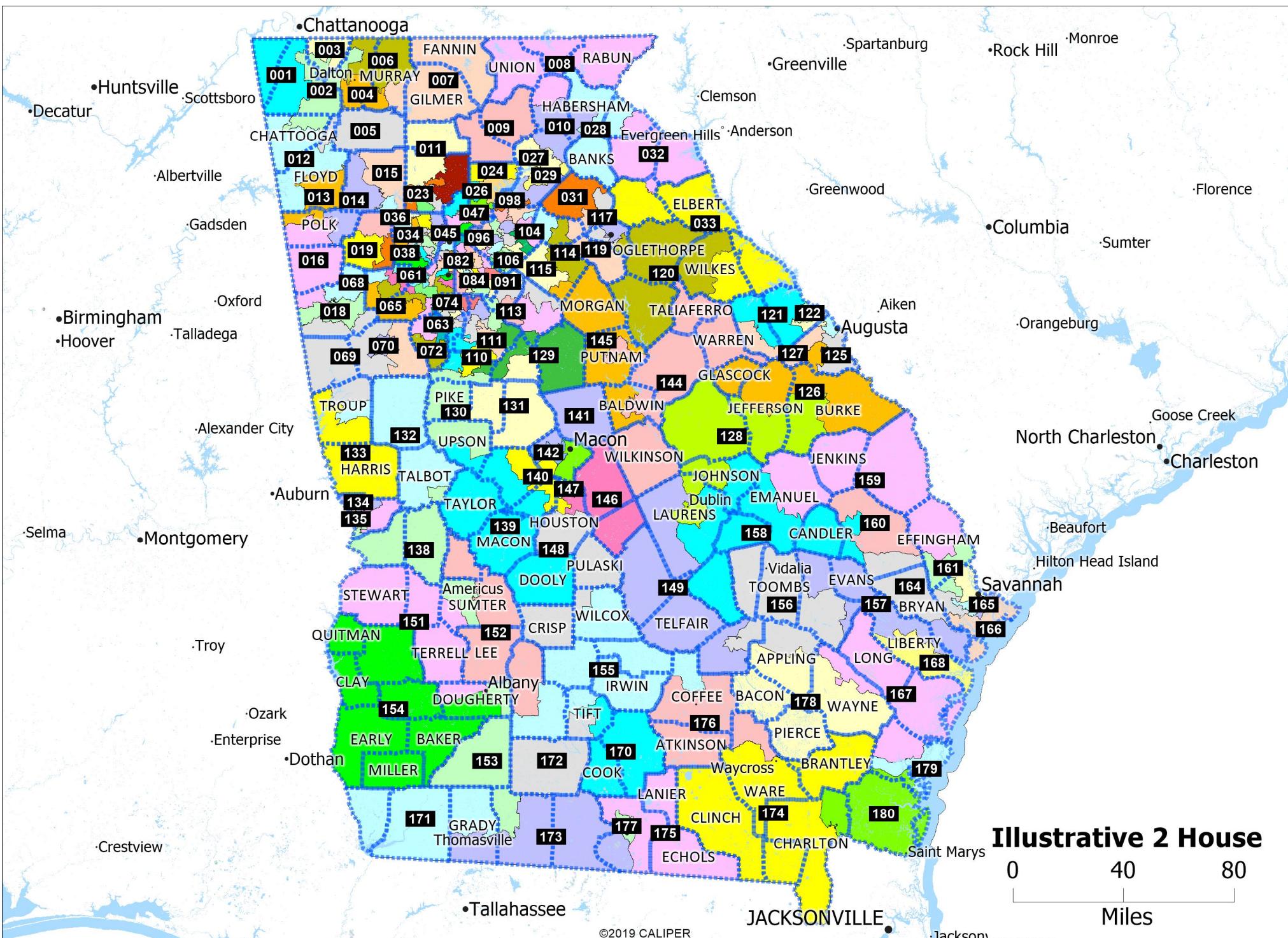




Illustrative 2 Senate

0 15 30

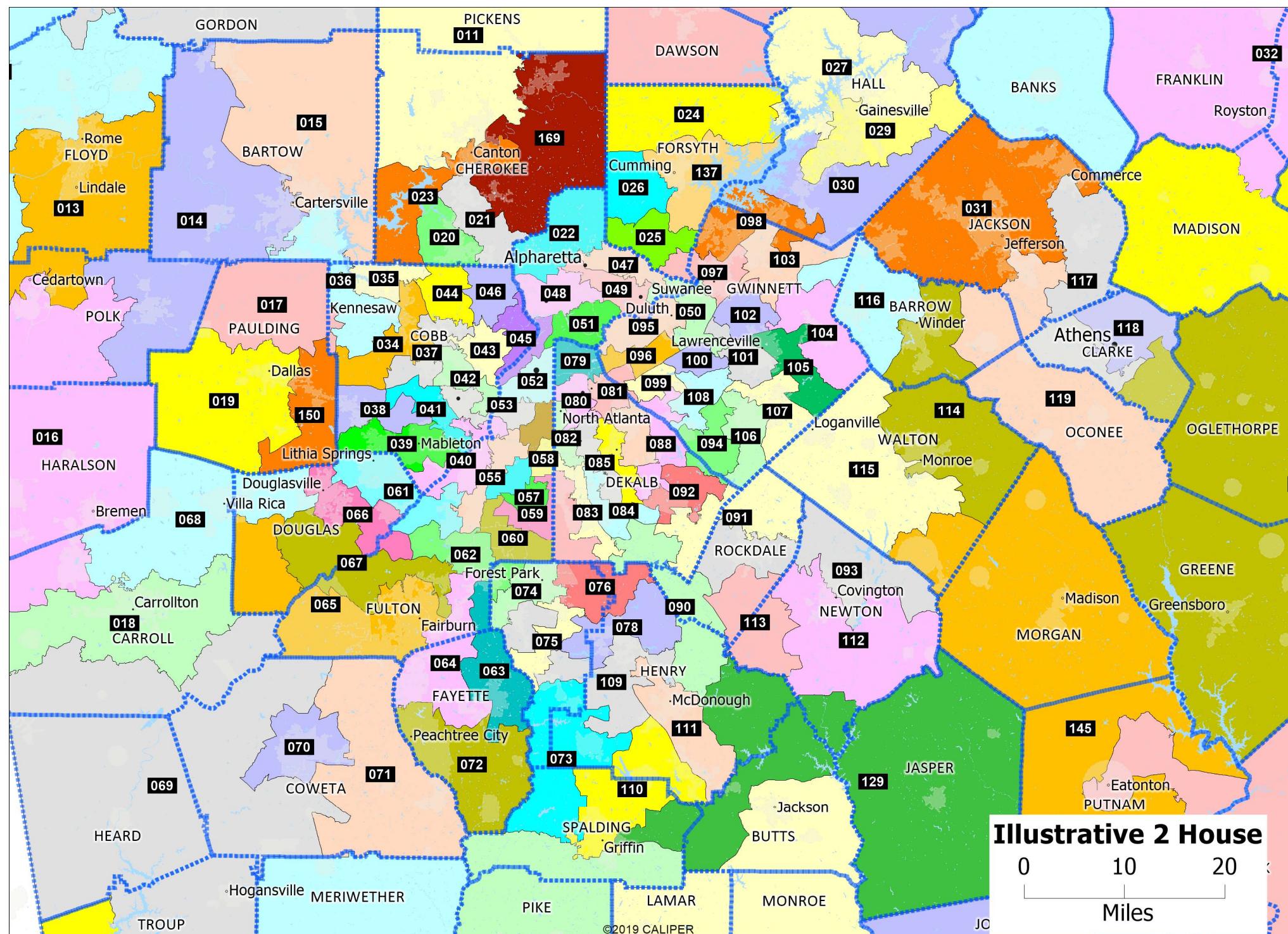
Miles



Illustrative 2 House

0 40 80

Miles



Illustrative 2 House

A horizontal number line starting at 0 and ending at 20. There is a tick mark halfway between 0 and 20, labeled "Miles" below the line.

EXHIBIT A-2

Population Summary Report

Georgia State Senate - Jan 19 Draft

District	2020 Pop.	% 2020		18+ AP Black	% 18+ AP Black	18+ NH White	% 18+ NH White	2015-19 BCVAP*	2015-19 LCVAP*	2015-19 ACVAP*	2015-19 B+L+A CVAP*	2015-19 NH White CVAP*	Incumbents
		Deviation	18+ Pop										
001	190422	-0.45%	145737	37684	25.86%	88176	60.50%	24.69%	6.29%	2.52%	33.50%	65.14%	1
002	193187	0.99%	153029	71064	46.44%	62214	40.66%	52.60%	4.26%	1.50%	58.37%	40.79%	1
003	189593	-0.88%	147133	27905	18.97%	105980	72.03%	20.79%	3.07%	1.31%	25.18%	73.98%	1
004	189778	-0.79%	144615	33866	23.42%	98287	67.96%	24.08%	2.63%	0.95%	27.65%	71.69%	1
005	189565	-0.90%	138831	42588	30.68%	29419	21.19%	37.68%	17.32%	11.14%	66.15%	32.70%	1
006	192162	0.46%	144728	72518	50.11%	38268	26.44%	53.94%	9.79%	2.45%	66.17%	33.41%	1
007	191638	0.19%	145231	47324	32.59%	83604	57.57%	32.13%	4.00%	1.15%	37.27%	61.87%	1
008	190960	-0.17%	144081	35029	24.31%	92298	64.06%	26.19%	4.89%	0.46%	31.53%	67.73%	1
009	190917	-0.19%	139935	71186	50.87%	40414	28.88%	50.27%	6.60%	5.01%	61.89%	37.28%	1
010	192564	0.67%	150543	105014	69.76%	33702	22.39%	70.00%	2.80%	1.61%	74.42%	24.98%	1
011	193080	0.94%	146576	43588	29.74%	88210	60.18%	30.87%	3.35%	0.43%	34.65%	64.53%	1
012	192997	0.90%	150855	86499	57.34%	56492	37.45%	58.64%	1.34%	0.73%	60.71%	38.74%	1
013	189512	-0.93%	146437	46703	31.89%	91125	62.23%	32.66%	2.21%	0.49%	35.35%	64.19%	1
014	189408	-0.98%	144804	13381	9.24%	107883	74.50%	9.18%	5.48%	1.39%	16.05%	83.02%	1
015	190014	-0.66%	144217	73953	51.28%	54825	38.02%	50.56%	5.48%	1.73%	57.77%	40.95%	1
016	192188	0.47%	147817	28084	19.00%	104658	70.80%	19.45%	3.29%	1.31%	24.05%	74.81%	1
017	190669	-0.32%	144304	90131	62.46%	44015	30.50%	58.65%	2.75%	1.42%	62.82%	36.47%	1
018	192402	0.58%	149925	39525	26.36%	98905	65.97%	26.25%	3.12%	1.70%	31.08%	68.10%	1
019	190681	-0.32%	136842	17295	12.64%	75740	55.35%	12.09%	6.70%	10.58%	29.37%	69.77%	1
020	190672	-0.32%	144582	44771	30.97%	85398	59.07%	31.82%	3.54%	1.81%	37.17%	62.34%	3
021	190228	-0.55%	143818	11810	8.21%	103899	72.24%	7.93%	5.29%	4.07%	17.29%	81.94%	1
022	192096	0.42%	150253	78364	52.15%	58156	38.71%	52.64%	4.12%	1.80%	58.57%	40.48%	1
023	193019	0.91%	150895	76265	50.54%	66957	44.37%	51.51%	1.90%	0.71%	54.12%	45.58%	0
024	189380	-1.00%	141326	28529	20.19%	94552	66.90%	19.38%	4.31%	3.00%	26.69%	72.23%	1
025	193153	0.98%	148510	32688	22.01%	105624	71.12%	22.67%	2.03%	0.76%	25.46%	74.15%	1
026	191806	0.27%	147242	79463	53.97%	55112	37.43%	55.20%	2.59%	0.91%	58.70%	40.38%	1
027	192327	0.55%	140032	6859	4.90%	99309	70.92%	3.84%	5.52%	4.74%	14.10%	85.27%	1
028	189511	-0.93%	144559	76234	52.74%	52312	36.19%	51.25%	4.28%	2.48%	58.01%	41.27%	1
029	192563	0.67%	148231	32337	21.82%	103502	69.82%	22.52%	2.59%	1.71%	26.81%	72.42%	1
030	191048	-0.12%	143290	40806	28.48%	86001	60.02%	26.49%	4.17%	0.86%	31.52%	67.30%	1
031	192838	0.81%	142871	20412	14.29%	108330	75.82%	12.58%	3.78%	0.81%	17.17%	82.28%	1
032	191998	0.37%	146873	16153	11.00%	101532	69.13%	10.55%	4.88%	6.07%	21.50%	77.60%	1
033	190485	-0.42%	152184	46655	30.66%	69048	45.37%	31.76%	7.31%	4.64%	43.71%	55.22%	0
034	192385	0.58%	141537	110176	77.84%	9886	6.98%	81.66%	4.48%	3.15%	89.29%	9.66%	1
035	190688	-0.31%	144403	91434	63.32%	42340	29.32%	62.38%	3.34%	0.58%	66.30%	33.20%	1
036	189709	-0.82%	155038	79675	51.39%	56246	36.28%	52.74%	3.72%	2.40%	58.87%	40.48%	1
037	191504	0.12%	148063	30815	20.81%	94452	63.79%	19.95%	5.42%	3.59%	28.96%	70.24%	1
038	190687	-0.31%	146367	80317	54.87%	50232	34.32%	55.58%	3.94%	1.59%	61.11%	38.19%	0
039	192517	0.64%	164280	84589	51.49%	57870	35.23%	55.63%	3.38%	4.57%	63.57%	35.72%	1
040	190619	-0.35%	148386	25289	17.04%	77864	52.47%	18.21%	5.78%	8.52%	32.50%	66.67%	1
041	192030	0.39%	143295	72313	50.46%	27568	19.24%	59.17%	5.82%	7.79%	72.78%	26.32%	1
042	190728	-0.29%	152760	32390	21.20%	86335	56.52%	23.86%	4.26%	5.71%	33.82%	65.21%	1
043	192877	0.83%	145032	84221	58.07%	48236	33.26%	55.83%	3.82%	0.95%	60.60%	38.61%	1
044	190473	-0.42%	143652	79117	55.08%	43805	30.49%	52.66%	5.29%	4.82%	62.77%	36.43%	1
045	189946	-0.70%	143418	36029	25.12%	57640	40.19%	24.68%	9.62%	11.80%	46.09%	53.06%	0
046	191838	0.29%	154586	31072	20.10%	101026	65.35%	23.54%	3.76%	2.88%	30.17%	69.04%	1
047	192337	0.55%	143977	14539	10.10%	109022	75.72%	9.56%	4.98%	2.22%	16.76%	82.43%	1
048	192864	0.83%	146388	22776	15.56%	62046	42.38%	17.14%	7.44%	19.14%	43.72%	55.48%	1
049	193020	0.91%	146060	11833	8.10%	92038	63.01%	8.83%	12.41%	2.03%	23.26%	75.92%	1
050	193087	0.94%	151880	16419	10.81%	121009	79.67%	11.88%	3.12%	0.94%	15.94%	83.31%	1
051	192202	0.48%	157732	2079	1.32%	142041	90.05%	1.44%	2.40%	0.54%	4.38%	94.49%	1
052	189397	-0.99%	145086	17368	11.97%	106752	73.58%	11.81%	5.27%	0.99%	18.07%	81.27%	1
053	190553	-0.38%	148171	6801	4.59%	130398	88.01%	4.46%	1.81%	0.73%	7.00%	91.96%	1
054	189836	-0.76%	143725	4156	2.89%	106459	74.07%	3.23%	9.89%	0.75%	13.87%	83.97%	1
055	189516	-0.92%	144254	74077	51.35%	42999	29.81%	53.66%	4.69%	6.02%	64.37%	34.69%	1
056	190234	-0.55%	151878	25818	17.00%	92122	60.66%	18.15%	5.83%	4.34%	28.32%	70.99%	1

Total
2020

Pop. 10,711,908 1.99% 8,220,274 2,607,986 31.73% 4,342,333 52.82%

Majority Districts

19

20

21

35

CVAP Source:

* 2015-19 ACS Special Tabulation

Note: Citizen Voting Age Population (CVAP) percentages are disaggregated from block-group level ACS estimates (with a survey midpoint of July 2017)

Source for disaggregation: Redistricting Data Hub

<https://redistrictingdatahub.org/dataset/georgia-cvap-data-disaggregated-to-the-2020-block-level-2019/>

EXHIBIT A-3

Population Summary Report

Georgia State House --Jan 19_House

District	2020 Pop.	% 2020 Deviation	18+ Pop	18+ AP Black	% 18+ AP Black	18+ NH White	% 18+ NH White	2015-19 BCVAP*	2015-19 LCVAP*	2015-19 ACVAP*	2015-19 B+L+A CVAP*	2015-19 NH White CVAP*	2015-19 Incumbent
001	59437	-0.12%	46702	1872	4.01%	41,873	89.66%	4.33%	1.50%	0.61%	6.45%	92.41%	1
002	59950	0.74%	46103	1428	3.10%	40,396	87.62%	2.74%	2.99%	0.27%	6.00%	92.98%	1
003	60199	1.16%	46716	1565	3.35%	41,325	88.46%	3.08%	1.83%	1.37%	6.29%	92.55%	1
004	59715	0.34%	43446	2164	4.98%	22,742	52.35%	5.09%	21.46%	0.44%	26.99%	71.87%	1
005	58992	-0.87%	44689	1958	4.38%	35,181	78.72%	4.45%	6.37%	0.91%	11.73%	87.30%	1
006	59171	-0.57%	44514	1035	2.33%	33,732	75.78%	2.80%	10.16%	1.46%	14.42%	85.09%	1
007	60117	1.02%	49292	311	0.63%	44,360	89.99%	0.73%	2.28%	0.42%	3.42%	95.10%	1
008	59365	-0.25%	50050	490	0.98%	45,859	91.63%	1.39%	2.31%	0.50%	4.19%	94.80%	1
009	60286	1.30%	49130	756	1.54%	43,602	88.75%	1.84%	2.75%	0.59%	5.18%	93.81%	1
010	59086	-0.71%	46638	1808	3.88%	40,194	86.18%	3.48%	3.24%	0.91%	7.63%	91.53%	1
011	59778	0.45%	47979	1360	2.83%	42,340	88.25%	3.04%	3.08%	0.84%	6.96%	88.11%	1
012	58876	-1.07%	45889	5769	12.57%	34,666	75.54%	11.82%	3.31%	1.08%	16.21%	83.56%	1
013	60165	1.10%	46446	7607	16.38%	33,270	71.63%	17.45%	4.55%	0.74%	22.74%	76.09%	1
014	59851	0.57%	45621	5640	12.36%	35,559	77.94%	12.33%	2.90%	0.37%	15.60%	83.85%	1
015	58951	-0.94%	45278	5297	11.70%	33,770	74.58%	11.63%	4.05%	1.11%	16.79%	82.16%	1
016	59084	-0.72%	44651	3328	7.45%	36,683	82.15%	9.12%	3.76%	0.60%	13.48%	85.97%	2
017	58802	-1.19%	41822	6656	15.92%	30,587	73.14%	10.44%	5.47%	0.73%	16.65%	82.41%	1
018	59116	-0.66%	45784	10515	22.97%	29,816	65.12%	22.76%	3.69%	0.48%	26.93%	72.01%	0
019	58641	-1.46%	43696	8349	19.11%	31,338	71.72%	16.47%	3.59%	1.89%	21.96%	77.76%	1
020	59666	0.26%	46479	4701	10.11%	34,117	73.40%	9.65%	6.04%	1.65%	17.34%	82.03%	1
021	60270	1.28%	45210	3516	7.78%	34,132	75.50%	7.79%	7.73%	1.62%	17.14%	82.12%	1
022	58963	-0.92%	42831	3209	7.49%	31,979	74.66%	9.61%	4.06%	5.26%	18.94%	80.58%	1
023	60197	1.15%	44638	3920	8.78%	31,316	70.16%	7.90%	5.42%	2.22%	15.55%	83.72%	1
024	60138	1.05%	43694	1620	3.71%	35,819	81.98%	1.63%	5.03%	1.24%	7.90%	91.75%	0
025	59131	-0.64%	41640	2743	6.59%	23,150	55.60%	6.20%	6.12%	12.97%	25.29%	73.84%	1
026	58847	-1.12%	41465	2232	5.38%	27,265	65.75%	5.60%	5.36%	7.39%	18.35%	80.50%	1
027	59826	0.53%	47540	2283	4.80%	36,129	76.00%	5.30%	9.82%	1.33%	16.45%	82.93%	1
028	59060	-0.76%	45656	2844	6.23%	36,993	81.03%	6.68%	4.21%	1.72%	12.61%	86.28%	1
029	58947	-0.95%	41714	6087	14.59%	14,625	35.06%	18.89%	24.83%	2.45%	46.16%	52.59%	1
030	59394	-0.20%	45499	2901	6.38%	32,464	71.35%	6.46%	8.63%	2.33%	17.42%	82.08%	1
031	59858	0.58%	44200	3370	7.62%	34,961	79.10%	8.49%	4.40%	2.03%	14.92%	84.43%	1
032	59541	0.05%	46808	5534	11.82%	38,219	81.65%	12.82%	2.01%	0.74%	15.56%	83.86%	1
033	59586	0.13%	46648	8571	18.37%	34,478	73.91%	20.26%	1.96%	0.32%	22.53%	77.09%	1
034	58806	-1.18%	45799	9739	21.26%	30,332	66.23%	20.53%	4.97%	3.04%	28.54%	70.60%	1
035	59432	-0.13%	45932	11287	24.57%	26,008	56.62%	25.41%	6.60%	4.00%	36.02%	62.89%	1
036	58748	-1.28%	44526	5425	12.18%	32,692	73.42%	10.31%	4.38%	3.85%	18.54%	81.04%	1
037	58759	-1.26%	45657	14366	31.47%	19,998	43.80%	34.50%	8.50%	4.09%	47.08%	52.67%	1
038	58628	-1.48%	44687	23014	51.50%	13,792	30.86%	51.77%	8.20%	2.80%	62.77%	36.62%	1
039	59217	-0.49%	45078	23090	51.22%	13,130	29.13%	52.36%	7.78%	2.22%	62.37%	37.74%	1
040	59087	-0.71%	43696	28674	65.62%	9,474	21.68%	69.36%	4.78%	2.00%	76.14%	23.14%	1
041	58750	-1.28%	43855	15527	35.41%	16,029	36.55%	40.39%	10.35%	4.56%	55.30%	44.07%	1
042	59492	-0.03%	49167	15717	31.97%	17,925	36.46%	39.05%	9.24%	4.95%	53.25%	45.30%	1
043	58895	-1.04%	45618	8790	19.27%	25,736	56.42%	18.03%	5.58%	6.20%	29.82%	68.89%	1
044	58816	-1.17%	47689	9059	19.00%	29,027	60.87%	17.52%	6.12%	4.65%	28.30%	70.68%	1
045	58712	-1.34%	44858	5725	12.76%	30,946	68.99%	9.64%	4.46%	5.16%	19.26%	80.39%	1
046	60086	0.97%	44683	3543	7.93%	33,464	74.89%	6.60%	4.71%	5.09%	16.39%	82.38%	1
047	59665	0.26%	45057	5818	12.91%	22,802	50.61%	13.73%	7.85%	14.63%	36.22%	62.74%	0
048	59887	0.63%	46318	6569	14.18%	28,517	61.57%	17.42%	6.50%	4.70%	28.63%	70.84%	1
049	58771	-1.24%	44121	5290	11.99%	24,051	54.51%	12.57%	4.67%	16.59%	33.83%	65.18%	1
050	60392	1.48%	46519	9063	19.48%	14,118	30.35%	18.47%	9.35%	28.55%	56.37%	42.48%	1
051	60227	1.20%	48254	10458	21.67%	28,040	58.11%	21.95%	5.16%	5.69%	32.80%	66.08%	1
052	60265	1.27%	49155	7426	15.11%	28,331	57.64%	15.81%	6.09%	4.86%	26.76%	72.49%	1
053	58830	-1.14%	47187	12966	27.48%	25,634	54.32%	26.27%	6.07%	3.85%	36.19%	63.09%	1
054	59230	-0.47%	51206	8367	16.34%	35,074	68.50%	14.25%	2.82%	5.90%	22.96%	76.25%	1
055	59073	-0.74%	47334	24895	52.59%	17,550	37.08%	57.34%	2.70%	1.81%	61.84%	37.36%	1
056	59420	-0.15%	52804	27857	52.76%	16,832	31.88%	57.59%	4.50%	7.26%	69.35%	29.92%	1
057	59610	0.17%	51582	29227	56.66%	16,826	32.62%	57.86%	3.82%	2.62%	64.31%	35.20%	1
058	59735	0.38%	52851	8978	16.99%	33,455	63.30%	13.97%	4.48%	5.26%	23.70%	75.41%	1
059	58942	-0.96%	47719	26665	55.88%	16,219	33.99%	60.67%	3.30%	1.78%	65.75%	33.68%	1
060	59197	-0.53%	45411	34928	76.92%	5,864	12.91%	80.25%	3.13%	0.89%	84.27%	15.14%	1
061	59666	0.26%	45697	32994	72.20%	8,230	18.01%	75.64%	4.16%	1.06%	80.86%	18.93%	1
062	59384	-0.21%	45565	41225	90.48%	1,744	3.83%	91.85%	1.92%	0.71%	94.48%	4.67%	1
063	58806	-1.18%	45567	30138	66.14%	11,676	25.62%	64.68%	3.15%	2.29%	70.12%	29.90%	1
064	59151	-0.60%	44832	29047	64.79%	11,797	26.31%	58.96%	3.87%	2.99%	65.82%	33.32%	1
065	58920	-0.99%	44304	28677	64.73%	11,644	26.28%	63.12%	3.70%	0.62%	67.44%	32.18%	1

Population Summary Report

Georgia State House --Jan 19_House

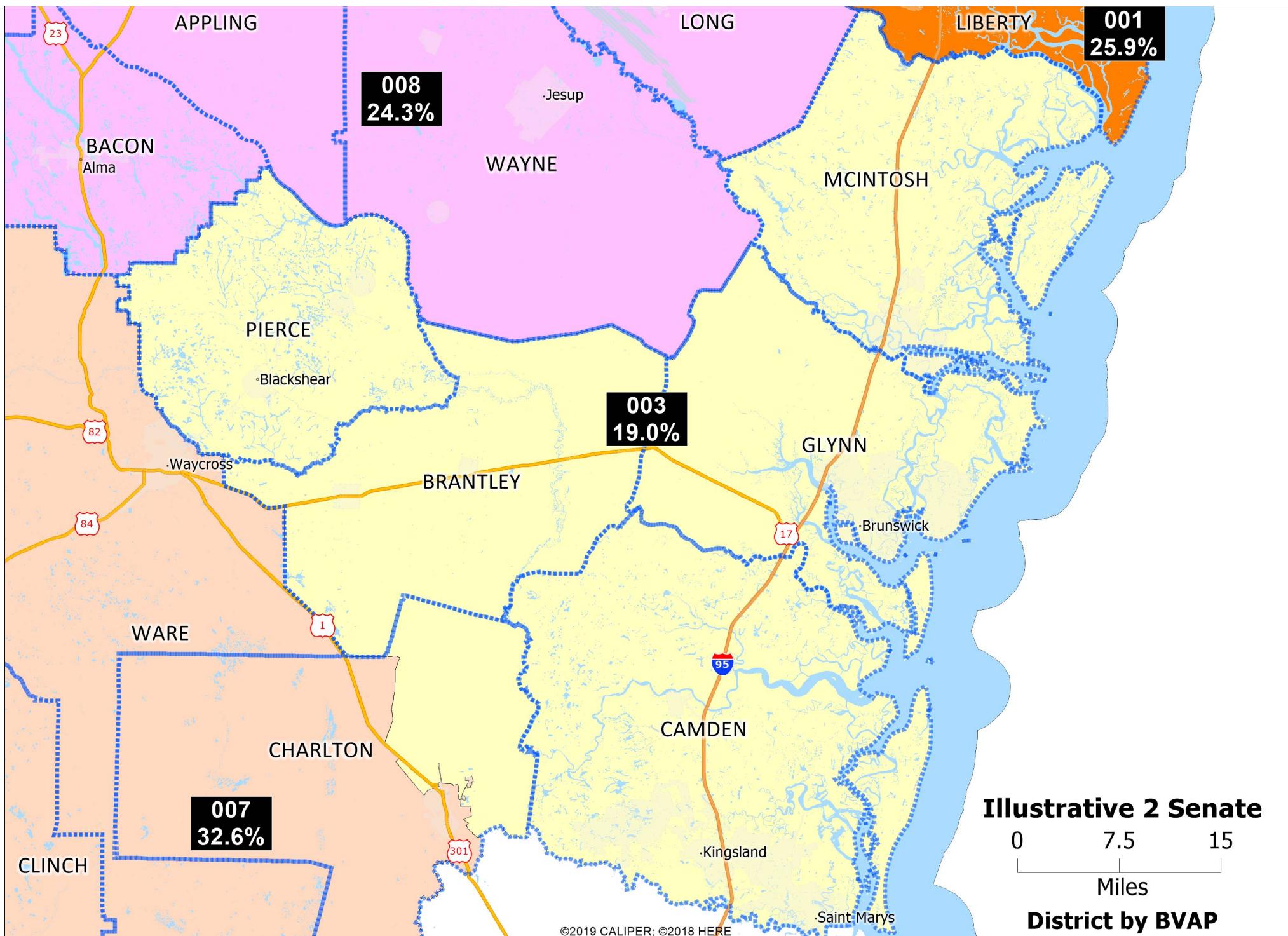
		% 2020	18+ Pop	18+ AP Black	% 18+ AP Black	18+ NH White	% 18+ NH White	2015-19 BCVAP*	2015-19 LCVAP*	2015-19 ACVAP*	2015-19 B+L+A CVAP*	2015-19 NH White CVAP*	2015-19 Incumbent
District	2020 Pop.	Deviation	18+ Pop	18+ AP Black	% 18+ AP Black	18+ NH White	% 18+ NH White	2015-19 BCVAP*	2015-19 LCVAP*	2015-19 ACVAP*	2015-19 B+L+A CVAP*	2015-19 NH White CVAP*	2015-19 Incumbent
066	60347	1.40%	44791	29544	65.96%	10,787	24.08%	61.44%	3.46%	1.38%	66.28%	32.05%	1
067	59645	0.23%	44739	28087	62.78%	12,904	28.84%	58.04%	3.23%	0.42%	61.69%	37.83%	0
068	58798	-1.20%	43885	10997	25.06%	28,222	64.31%	25.13%	3.57%	0.92%	29.63%	70.05%	1
069	59534	0.04%	45679	5452	11.94%	37,178	81.39%	12.42%	2.13%	1.02%	15.57%	83.22%	1
070	59744	0.39%	45324	13530	29.85%	25,142	55.47%	30.95%	6.78%	2.31%	40.04%	58.82%	1
071	60122	1.03%	45707	4375	9.57%	36,597	80.07%	8.40%	3.79%	1.17%	13.36%	86.17%	1
072	58656	-1.44%	44356	4212	9.50%	33,237	74.93%	8.44%	4.56%	2.57%	15.57%	82.86%	1
073	60364	1.43%	45016	27267	60.57%	13,220	29.37%	58.61%	4.70%	1.74%	65.04%	34.15%	1
074	58666	-1.42%	43337	30556	70.51%	3,867	8.92%	76.95%	5.52%	4.42%	86.89%	11.78%	1
075	58818	-1.16%	43406	29530	68.03%	5,224	12.04%	71.49%	6.85%	5.52%	83.86%	14.70%	1
076	60113	1.01%	45375	32656	71.97%	5,826	12.84%	74.34%	4.77%	4.18%	83.29%	16.42%	1
077	58912	-1.01%	43070	32766	76.08%	2,874	6.67%	81.32%	5.37%	2.96%	89.65%	9.11%	1
078	59048	-0.78%	45065	24825	55.09%	13,085	29.04%	50.85%	5.85%	5.25%	61.96%	37.47%	1
079	58770	-1.25%	44626	6312	14.14%	24,204	54.24%	14.57%	4.76%	8.16%	27.50%	71.54%	1
080	60350	1.41%	46448	8049	17.33%	20,685	44.53%	21.85%	7.12%	8.19%	37.17%	62.50%	1
081	59188	-0.54%	44856	10639	23.72%	11,988	26.73%	30.23%	14.09%	11.59%	55.92%	42.55%	1
082	58675	-1.40%	49870	8926	17.90%	28,315	56.78%	15.24%	5.62%	7.30%	28.16%	70.82%	1
083	58898	-1.03%	44947	25250	56.18%	16,281	36.22%	59.85%	2.58%	1.95%	64.38%	35.16%	1
084	58670	-1.41%	46089	31650	68.67%	11,665	25.31%	74.24%	1.31%	1.32%	76.86%	22.73%	1
085	58922	-0.99%	47601	19783	41.56%	19,894	41.79%	49.98%	2.26%	4.40%	56.64%	41.92%	1
086	59065	-0.75%	43463	24022	55.27%	10,490	24.14%	58.45%	2.44%	5.48%	66.37%	32.00%	1
087	59585	0.12%	45472	25676	56.47%	11,391	25.05%	59.08%	3.37%	6.54%	69.00%	30.64%	1
088	59408	-0.17%	45810	26326	57.47%	9,529	20.80%	63.28%	4.38%	5.64%	73.30%	26.19%	1
089	59915	0.68%	48186	26012	53.98%	18,319	38.02%	56.91%	2.36%	1.93%	61.19%	37.98%	1
090	60246	1.24%	47314	34739	73.42%	10,383	21.94%	70.80%	2.52%	1.04%	74.36%	25.44%	1
091	60390	1.48%	45133	35001	77.55%	6,348	14.07%	76.15%	4.42%	0.96%	81.53%	17.76%	1
092	59279	-0.39%	45194	41831	92.56%	1,443	3.19%	94.02%	1.54%	0.39%	95.95%	3.54%	1
093	60260	1.26%	45920	25233	54.95%	16,745	36.47%	51.89%	3.42%	1.43%	56.74%	42.91%	1
094	59284	-0.38%	44177	23246	52.62%	12,161	27.53%	55.47%	4.34%	4.04%	63.84%	35.64%	1
095	58825	-1.15%	46205	8699	18.83%	23,380	50.60%	20.40%	5.70%	12.12%	38.22%	61.19%	1
096	58713	-1.34%	43674	11976	27.42%	8,849	20.26%	37.37%	18.06%	12.17%	67.61%	31.74%	1
097	58771	-1.24%	42969	6202	14.43%	19,803	46.09%	13.97%	6.18%	19.96%	40.12%	60.28%	1
098	58629	-1.48%	42827	5044	11.78%	26,495	61.87%	11.85%	6.60%	5.95%	24.40%	74.73%	1
099	58815	-1.17%	41927	9348	22.30%	5,194	12.39%	32.90%	22.43%	18.07%	73.40%	25.83%	1
100	58895	-1.04%	43773	13867	31.68%	6,434	14.70%	39.39%	19.12%	15.54%	74.05%	24.93%	1
101	59164	-0.58%	44516	13187	29.62%	13,550	30.44%	32.18%	11.99%	13.56%	57.74%	41.57%	1
102	59365	-0.25%	46364	10979	23.68%	18,795	40.54%	23.74%	8.66%	12.51%	44.91%	53.79%	1
103	59725	0.36%	43964	8801	20.02%	21,427	48.74%	19.94%	10.38%	6.98%	37.30%	61.33%	0
104	58654	-1.44%	42236	12480	29.55%	20,548	48.65%	23.36%	8.42%	5.13%	36.91%	62.22%	1
105	58966	-0.92%	41844	19286	46.09%	12,357	29.53%	43.96%	10.16%	5.49%	59.60%	39.44%	1
106	58654	-1.44%	43493	21269	48.90%	13,917	32.00%	47.95%	7.37%	5.28%	60.60%	38.73%	1
107	59972	0.77%	43794	18994	43.37%	17,083	39.01%	40.25%	6.01%	4.90%	51.16%	46.81%	1
108	58895	-1.04%	43797	9562	21.83%	16,906	38.60%	24.10%	10.19%	12.45%	46.75%	52.14%	1
109	60106	1.00%	45719	26570	58.12%	12,933	28.29%	52.77%	5.26%	3.95%	61.98%	35.15%	1
110	60333	1.38%	45293	23724	52.38%	17,438	38.50%	50.47%	4.12%	0.81%	55.40%	45.30%	1
111	58877	-1.07%	43374	23908	55.12%	14,916	34.39%	50.14%	4.61%	2.24%	56.99%	42.64%	1
112	60318	1.36%	45032	24145	53.62%	17,470	38.79%	51.59%	3.44%	0.62%	55.64%	43.81%	0
113	59934	0.71%	45777	26080	56.97%	15,434	33.72%	52.85%	2.94%	2.30%	58.09%	40.44%	1
114	59460	-0.09%	44583	9619	21.58%	29,300	65.72%	22.50%	4.32%	1.34%	28.17%	71.48%	1
115	59186	-0.55%	44678	5913	13.23%	34,585	77.41%	10.69%	2.61%	1.68%	14.99%	84.22%	1
116	59175	-0.56%	43703	5104	11.68%	30,740	70.34%	9.13%	6.05%	5.22%	20.40%	78.42%	1
117	59968	0.77%	49540	8470	17.10%	33,403	67.43%	18.88%	3.56%	2.45%	24.89%	74.11%	1
118	60268	1.27%	49965	13150	26.32%	28,246	56.53%	31.60%	5.39%	3.94%	40.93%	58.16%	1
119	60064	0.93%	43964	3440	7.82%	35,104	79.85%	8.06%	4.11%	2.52%	14.69%	84.90%	1
120	59968	0.77%	48143	12604	26.18%	30,811	64.00%	29.90%	2.17%	0.98%	33.06%	66.44%	1
121	59056	-0.76%	43180	10383	24.05%	27,549	63.80%	25.49%	6.11%	1.64%	33.23%	65.10%	1
122	58712	-1.34%	43395	6465	14.90%	30,535	70.37%	13.05%	4.42%	5.07%	22.54%	76.50%	1
123	59314	-0.33%	45628	9401	20.60%	29,916	65.57%	15.74%	3.70%	3.58%	23.02%	75.81%	1
124	59743	0.39%	48100	24637	51.22%	19,752	41.06%	51.31%	2.74%	2.00%	56.05%	43.54%	1
125	60329	1.37%	44930	26323	58.59%	15,698	34.94%	57.91%	2.98%	0.57%	61.46%	37.55%	1
126	59319	-0.32%	45424	24204	53.28%	18,722	41.22%	55.29%	3.36%	1.34%	60.00%	38.97%	1
127	58981	-0.89%	45754	24122	52.72%	15,783	34.50%	55.89%	5.28%	1.67%	62.84%	36.58%	1
128	59778	0.45%	46116	25887	56.13%	18,659	40.46%	55.20%	1.76%	0.30%	57.26%	42.68%	1
129	60366	1.44%	45898	9084	19.79%	33,569	73.14%	18.82%	2.24%	0.43%	21.49%	77.46%	2
130	59587	0.13%	46284	7170	15.49%	36,697	79.29%	14.16%	0.86%	1.09%	16.11%	82.24%	1
131	58988	-0.88%	46234	12262	26.52%	31,651	68.46%	28.65%	1.88%	0.50%	31.03%	68.31%	0
132	58773	-1.24%	45237	20829	46.04%	21,329	47.15%	47.57%	1.51%	0.78%	49.84%	50.07%	1

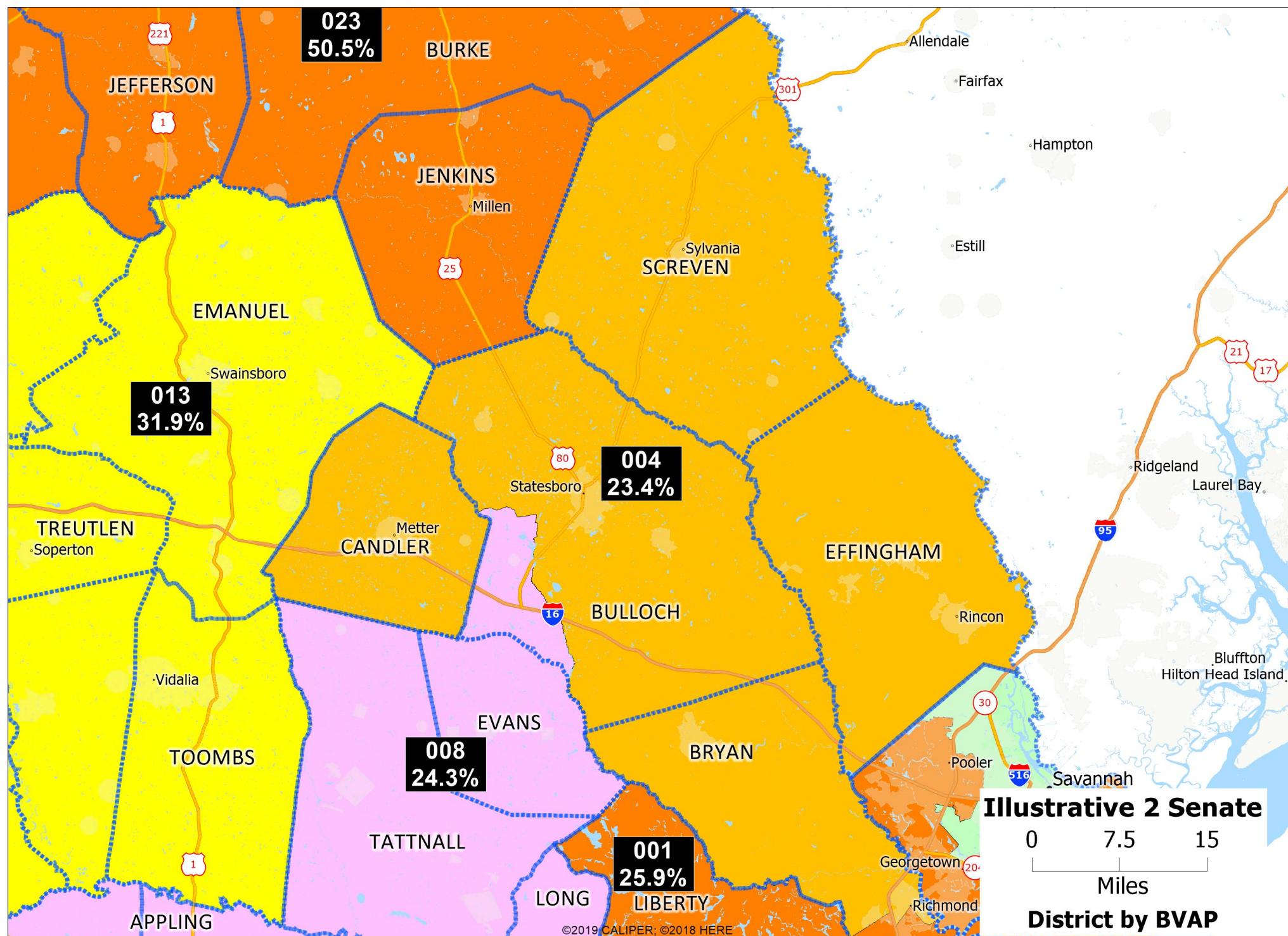
Population Summary Report

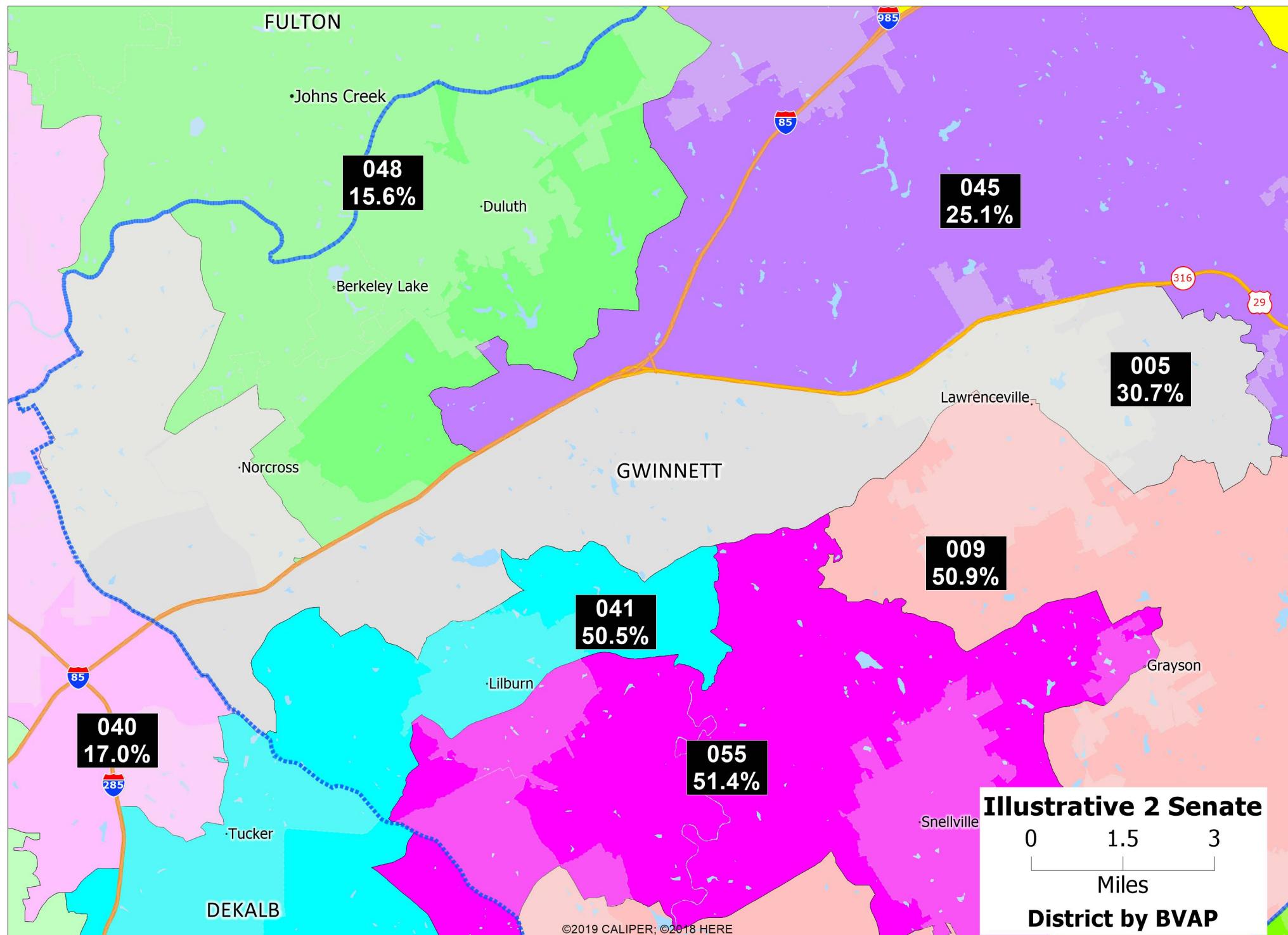
Georgia State House --Jan 19_House

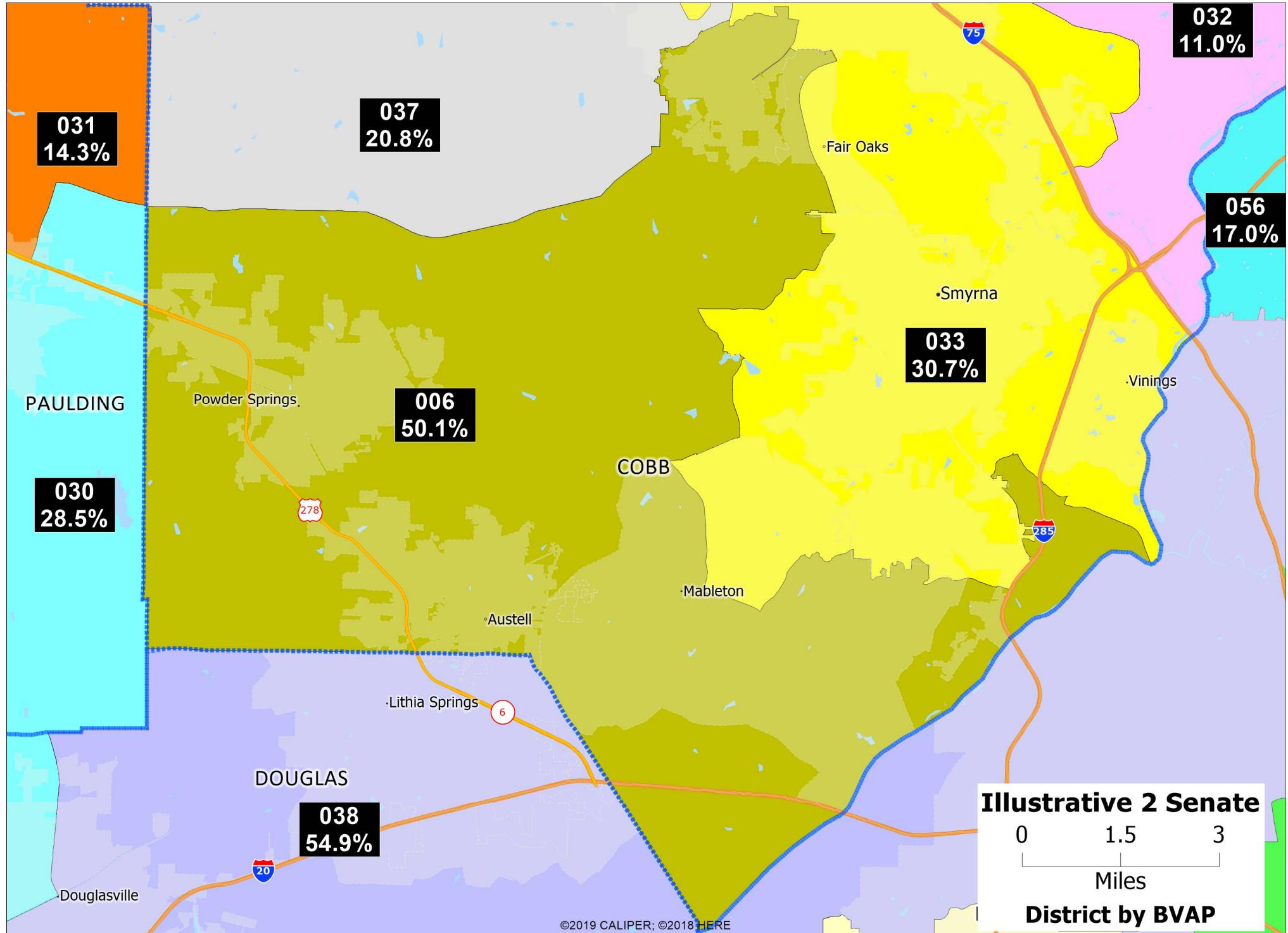
District	2020 Pop.	% 2020 Deviation	18+ Pop	18+ AP Black		18+ NH White		2015-19 BCVAP*		2015-19 LCVAP*		2015-19 ACVAP*		2015-19 B+L+A CVAP*		2015-19 NH White CVAP*		Incumbent	
				18+	AP Black	% 18+ AP Black	18+ NH White	% 18+ NH White	2015-19 BCVAP*	2015-19 LCVAP*	2015-19 ACVAP*	2015-19 B+L+A CVAP*	2015-19 NH White CVAP*	2015-19 B+L+A CVAP*	2015-19 NH White CVAP*	2015-19 B+L+A CVAP*	2015-19 NH White CVAP*		
133	59012	-0.84%	45765	8177	17.87%	34,472	75.32%	19.52%	2.96%	0.73%	23.22%	75.96%	1	23.22%	75.96%	1	23.22%	75.96%	1
134	60267	1.27%	46314	10009	21.61%	29,026	62.67%	19.90%	6.01%	4.70%	30.61%	67.71%	1	30.61%	67.71%	1	30.61%	67.71%	1
135	60394	1.48%	46220	23789	51.47%	18,003	38.95%	53.09%	4.18%	0.99%	58.25%	40.34%	1	58.25%	40.34%	1	58.25%	40.34%	1
136	60319	1.36%	45737	27518	60.17%	13,921	30.44%	57.53%	5.86%	1.70%	65.09%	34.09%	1	65.09%	34.09%	1	65.09%	34.09%	1
137	59571	0.10%	44675	1706	3.82%	31,094	69.60%	3.45%	5.31%	4.53%	13.29%	85.84%	1	13.29%	85.84%	1	13.29%	85.84%	1
138	60369	1.44%	45111	23620	52.36%	16,367	36.28%	52.83%	6.87%	1.77%	61.47%	38.14%	2	61.47%	38.14%	2	61.47%	38.14%	2
139	58655	-1.44%	46825	24816	53.00%	18,739	40.02%	55.23%	2.73%	0.38%	58.34%	41.81%	1	58.34%	41.81%	1	58.34%	41.81%	1
140	59514	0.01%	45283	11282	24.91%	28,854	63.72%	23.67%	3.53%	3.86%	31.05%	68.44%	2	31.05%	68.44%	2	31.05%	68.44%	2
141	59635	0.21%	46376	12450	26.85%	30,458	65.68%	25.55%	2.09%	2.24%	29.87%	69.00%	1	29.87%	69.00%	1	29.87%	69.00%	1
142	59571	0.10%	43807	27567	62.93%	13,843	31.60%	65.19%	1.30%	1.17%	67.66%	32.01%	1	67.66%	32.01%	1	67.66%	32.01%	1
143	60158	1.09%	47032	27762	59.03%	15,915	33.84%	57.23%	1.79%	1.08%	60.09%	39.21%	1	60.09%	39.21%	1	60.09%	39.21%	1
144	59091	-0.71%	48207	24303	50.41%	21,635	44.88%	52.61%	1.54%	0.52%	54.67%	45.28%	1	54.67%	45.28%	1	54.67%	45.28%	1
145	58633	-1.48%	46474	9824	21.14%	33,908	72.96%	22.47%	1.80%	0.73%	25.00%	74.07%	1	25.00%	74.07%	1	25.00%	74.07%	1
146	60272	1.28%	45763	12384	27.06%	28,835	63.01%	27.14%	4.13%	1.57%	32.85%	66.03%	1	32.85%	66.03%	1	32.85%	66.03%	1
147	60203	1.16%	45383	18665	41.13%	21,260	46.85%	40.96%	3.64%	1.24%	45.84%	52.90%	1	45.84%	52.90%	1	45.84%	52.90%	1
148	60261	1.26%	46384	15799	34.06%	27,866	60.08%	35.91%	2.11%	0.32%	38.34%	61.20%	1	38.34%	61.20%	1	38.34%	61.20%	1
149	60393	1.48%	47506	13263	27.92%	30,684	64.59%	29.33%	1.92%	0.63%	31.88%	67.59%	2	31.88%	67.59%	2	31.88%	67.59%	2
150	59281	-0.39%	44290	13864	31.30%	25,589	57.78%	27.78%	4.75%	0.47%	33.00%	65.64%	1	33.00%	65.64%	1	33.00%	65.64%	1
151	60241	1.23%	47603	26961	56.64%	17,328	36.40%	57.36%	1.68%	1.19%	60.24%	39.24%	1	60.24%	39.24%	1	60.24%	39.24%	1
152	60383	1.47%	46089	12491	27.10%	30,436	66.04%	27.87%	2.59%	1.59%	32.06%	66.29%	1	32.06%	66.29%	1	32.06%	66.29%	1
153	60315	1.35%	46133	26737	57.96%	17,158	37.19%	60.06%	1.10%	0.48%	61.64%	37.40%	1	61.64%	37.40%	1	61.64%	37.40%	1
154	60120	1.02%	47053	28682	60.96%	17,009	36.15%	61.51%	0.93%	0.11%	62.54%	36.86%	2	62.54%	36.86%	2	62.54%	36.86%	2
155	60299	1.32%	46955	13625	29.02%	30,108	64.12%	30.29%	2.36%	0.47%	33.11%	66.51%	1	33.11%	66.51%	1	33.11%	66.51%	1
156	60310	1.34%	45966	11261	24.50%	29,666	64.54%	27.56%	6.18%	0.41%	34.15%	65.17%	1	34.15%	65.17%	1	34.15%	65.17%	1
157	60385	1.47%	43879	8911	20.31%	29,670	67.62%	18.78%	5.30%	1.53%	25.60%	73.24%	1	25.60%	73.24%	1	25.60%	73.24%	1
158	59899	0.65%	46645	13389	28.70%	30,321	65.00%	29.75%	1.83%	0.18%	31.75%	67.67%	1	31.75%	67.67%	1	31.75%	67.67%	1
159	60289	1.31%	45813	13511	29.49%	29,922	65.31%	30.64%	1.58%	0.61%	32.83%	66.49%	1	32.83%	66.49%	1	32.83%	66.49%	1
160	60376	1.45%	48275	13686	28.35%	30,410	62.99%	29.21%	2.71%	0.95%	32.86%	66.60%	1	32.86%	66.60%	1	32.86%	66.60%	1
161	58778	-1.23%	43577	7209	16.54%	30,951	71.03%	14.95%	3.31%	1.76%	20.01%	78.46%	1	20.01%	78.46%	1	20.01%	78.46%	1
162	58812	-1.17%	46024	23512	51.09%	15,576	33.84%	59.67%	3.65%	0.72%	64.03%	35.84%	1	64.03%	35.84%	1	64.03%	35.84%	1
163	59794	0.48%	47195	20965	44.42%	20,150	42.70%	47.07%	5.85%	2.29%	55.21%	43.59%	1	55.21%	43.59%	1	55.21%	43.59%	1
164	59044	-0.78%	45603	12625	27.68%	26,700	58.55%	26.91%	4.44%	2.21%	33.56%	65.76%	1	33.56%	65.76%	1	33.56%	65.76%	1
165	58747	-1.28%	47382	21620	45.63%	21,089	44.51%	55.42%	2.77%	1.07%	59.26%	39.61%	0	59.26%	39.61%	0	59.26%	39.61%	0
166	60391	1.48%	49311	5197	10.54%	39,002	79.09%	10.98%	2.92%	2.90%	16.80%	82.62%	1	16.80%	82.62%	1	16.80%	82.62%	1
167	59467	-0.07%	44901	9385	20.90%	30,674	68.31%	24.06%	3.54%	0.83%	28.44%	70.51%	1	28.44%	70.51%	1	28.44%	70.51%	1
168	59770	0.44%	43539	20902	48.01%	15,893	36.50%	46.31%	11.58%	2.03%	59.92%	38.18%	1	59.92%	38.18%	1	59.92%	38.18%	1
169	59925	0.70%	45421	1798	3.96%	38,876	85.59%	2.53%	2.42%	0.88%	5.83%	93.29%	1	5.83%	93.29%	1	5.83%	93.29%	1
170	59423	-0.15%	45091	8842	19.61%	31,424	69.69%	18.27%	3.75%	1.04%	23.06%	76.67%	1	23.06%	76.67%	1	23.06%	76.67%	1
171	60381	1.46%	46194	16434	35.58%	25,712	55.66%	36.86%	2.56%	0.63%	40.04%	59.13%	0	40.04%	59.13%	0	40.04%	59.13%	0
172	59115	-0.67%	43781	12277	28.04%	24,085	55.01%	32.55%	6.73%	0.61%	39.88%	59.28%	1	39.88%	59.28%	1	39.88%	59.28%	1
173	60277	1.29%	46589	12839	27.56%	30,321	65.08%	27.33%	2.41%	0.62%	30.35%	68.75%	2	30.35%	68.75%	2	30.35%	68.75%	2
174	59569	0.10%	45564	10033	22.02%	31,381	68.87%	21.69%	2.09%	0.78%	24.56%	74.80%	1	24.56%	74.80%	1	24.56%	74.80%	1
175	60326	1.37%	44932	9409	20.94%	30,669	68.26%	20.09%	5.81%	0.92%	26.83%	71.60%	1	26.83%	71.60%	1	26.83%	71.60%	1
176	60139	1.06%	45709	11769	25.75%	28,225	61.75%	27.76%	5.20%	0.43%	33.39%	65.75%	1	33.39%	65.75%	1	33.39%	65.75%	1
177	59888	0.63%	45493	23477	51.61%	17,877	39.30%	50.02%	3.47%	1.87%	55.36%	44.57%	1	55.36%	44.57%	1	55.36%	44.57%	1
178	60261	1.26%	45780	7164	15.65%	34,933	76.31%	16.83%	3.21%	0.38%	20.42%	79.21%	1	20.42%	79.21%	1	20.42%	79.21%	1
179	59502	-0.02%	47468	12476	26.28%	30,835	64.96%	27.36%	2.91%	1.63%	31.90%	67.38%	1	31.90%	67.38%	1	31.90%	67.38%	1
180	60160	1.09%	45771	8338	18.22%	32,584	71.19%	19.63%	4.76%	1.59%	25.98%	72.79%	1	25.98%	72.79%	1	25.98%	72.79%	1
Total																			
2020																			
Pop.	10,711,908	2.96%	8,220,274	2,607,986	31.73%	4,342,333	52.82%												
Majority Districts					54	101										69	111		

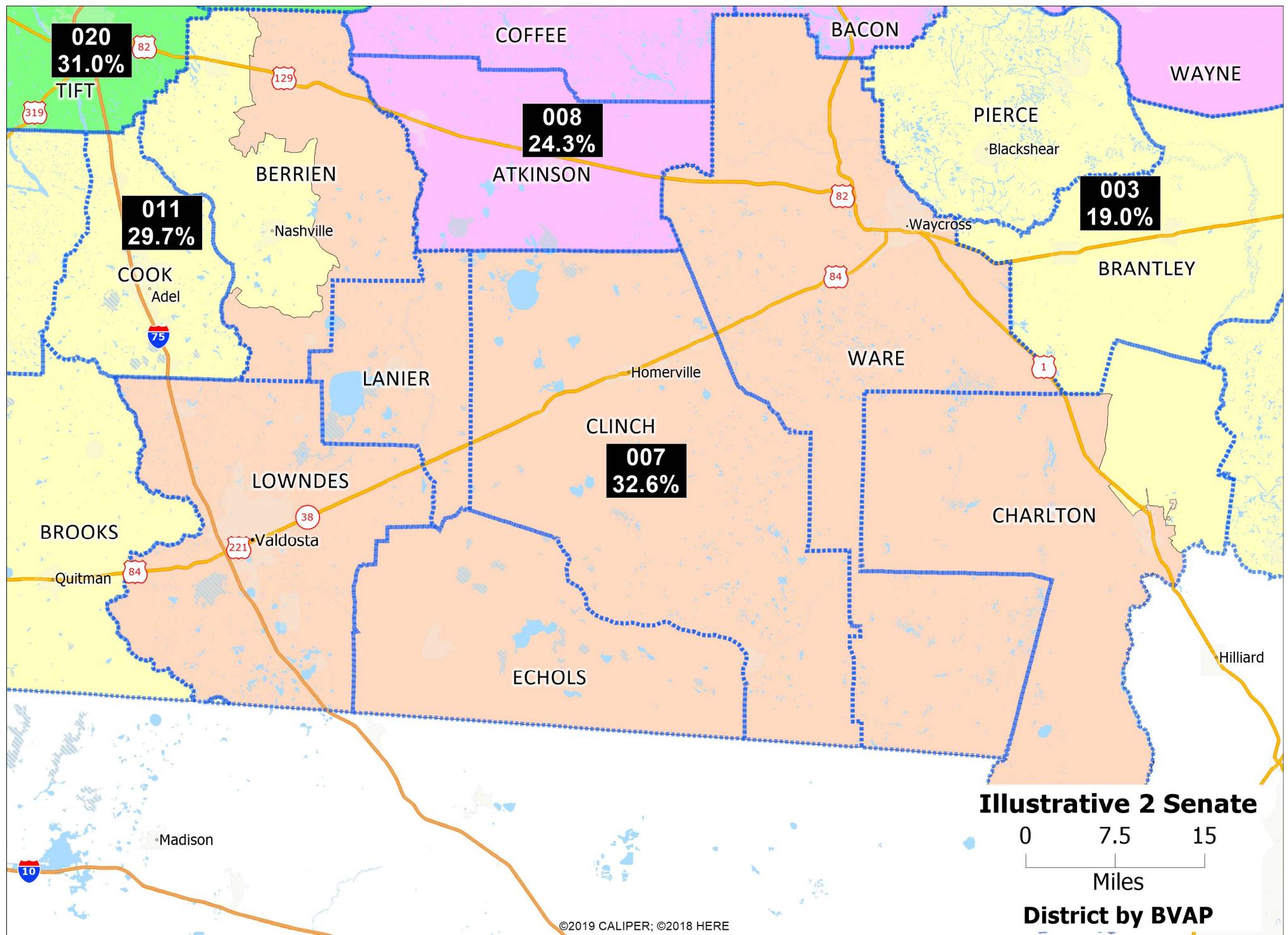
EXHIBIT A-4



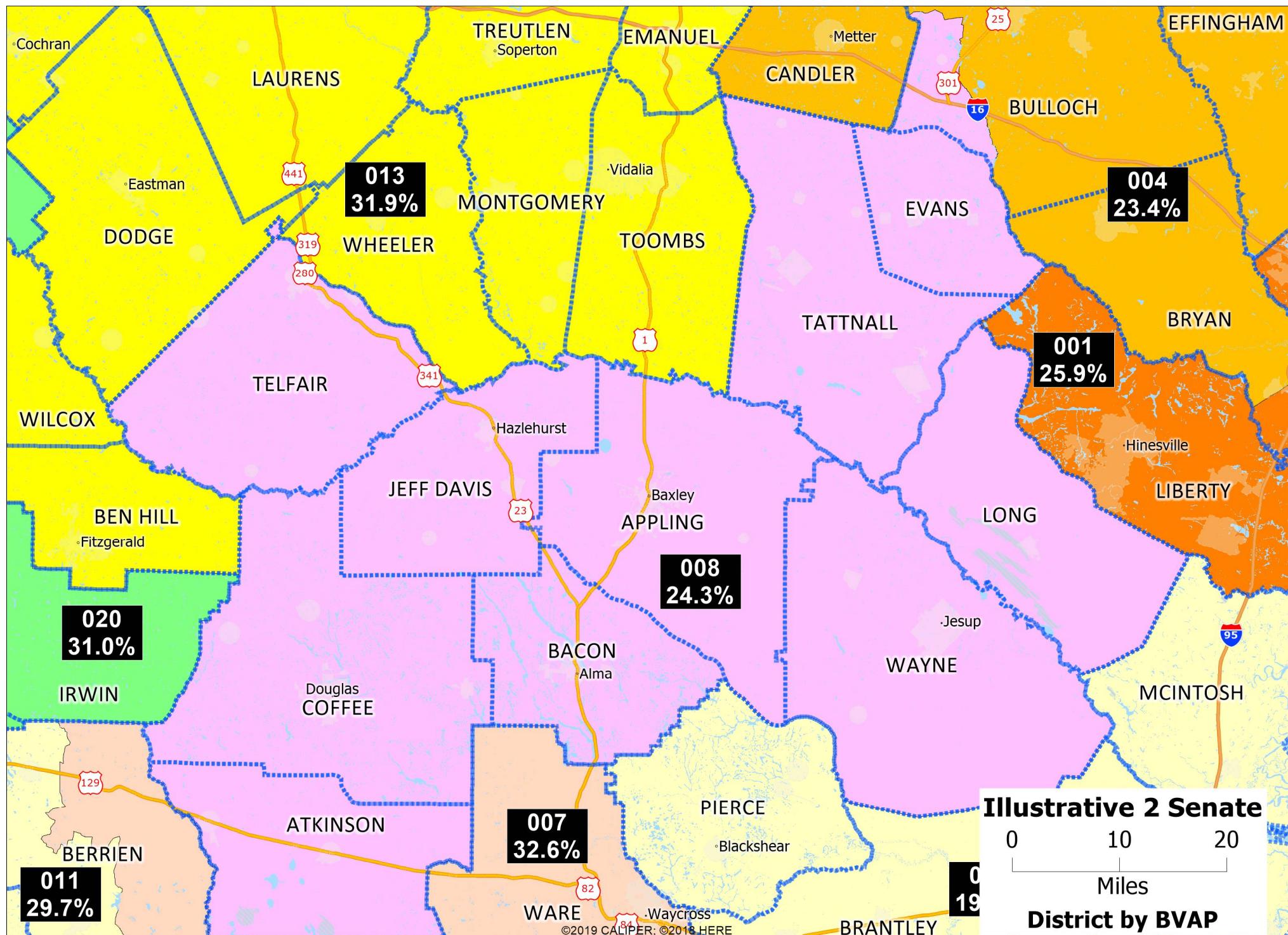


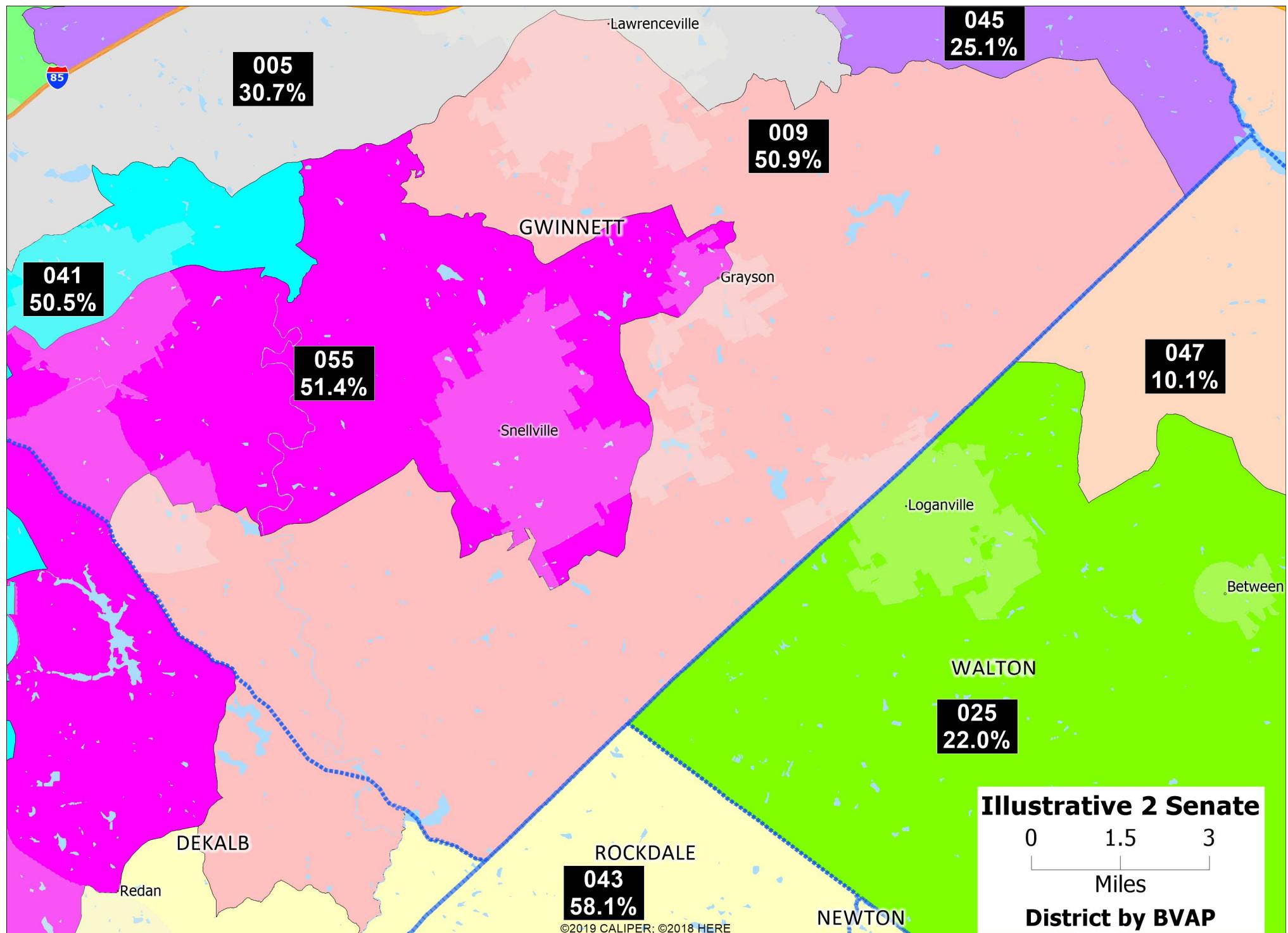


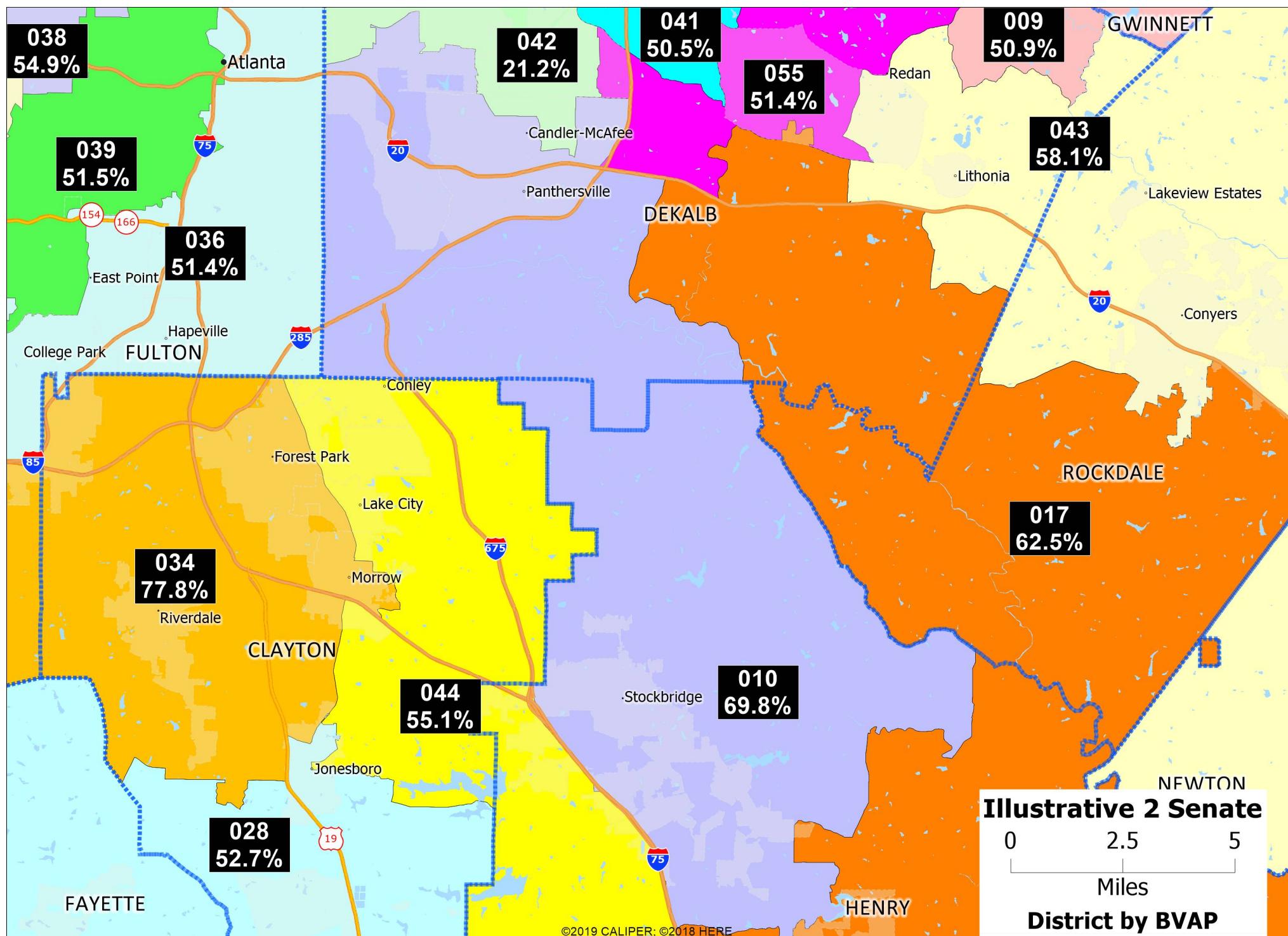


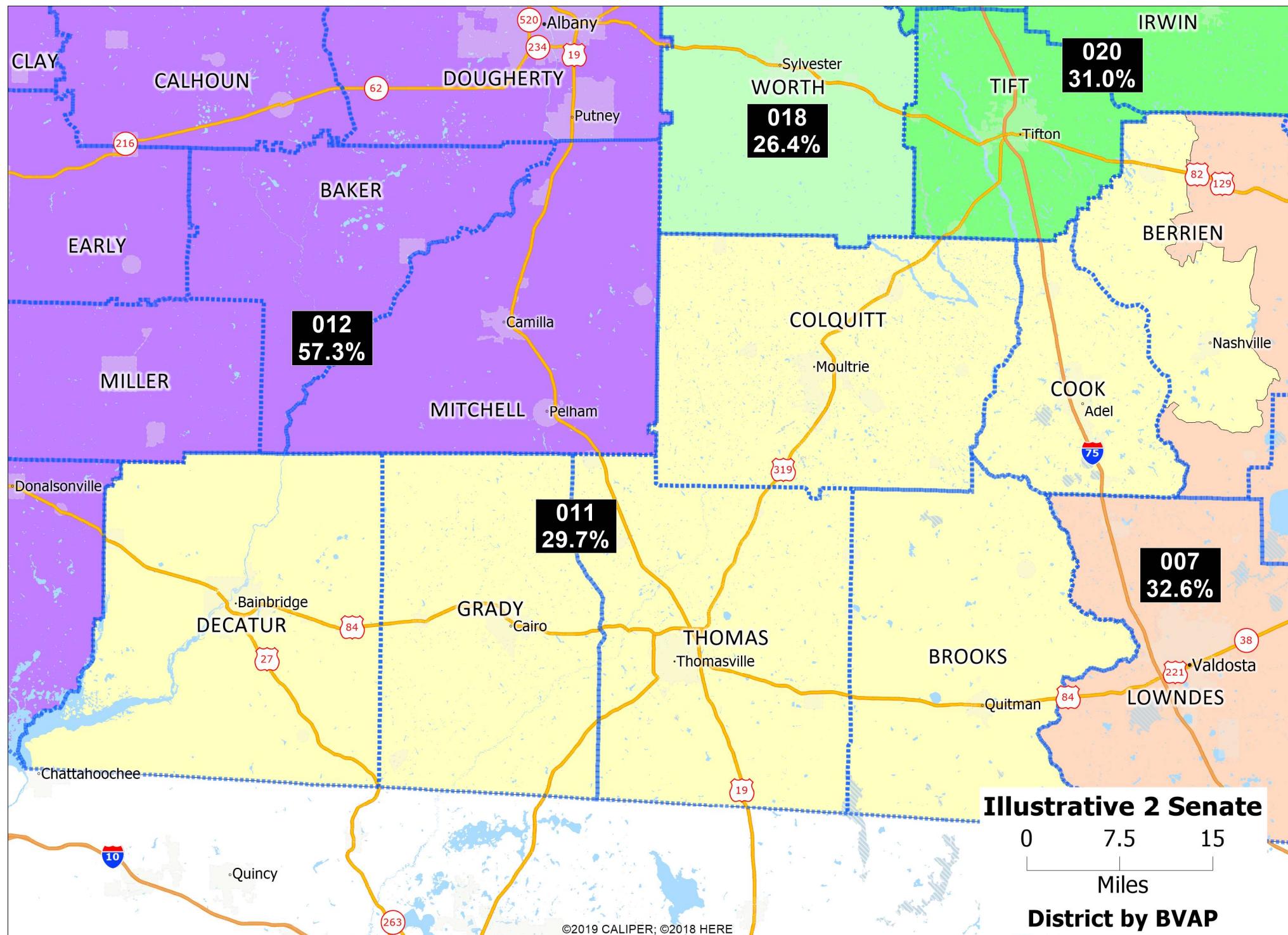


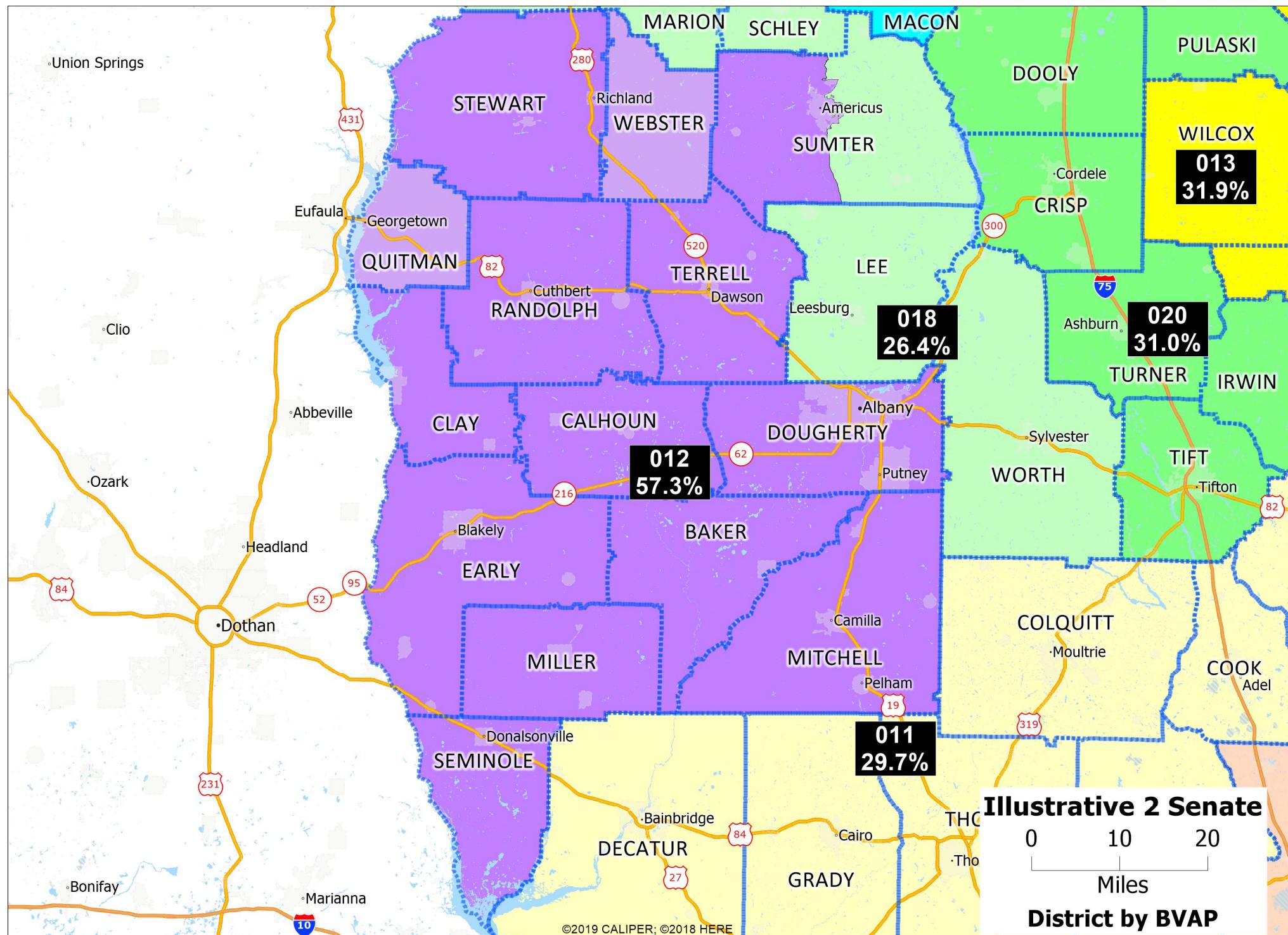
©2019 CALIPER; ©2018 HERE

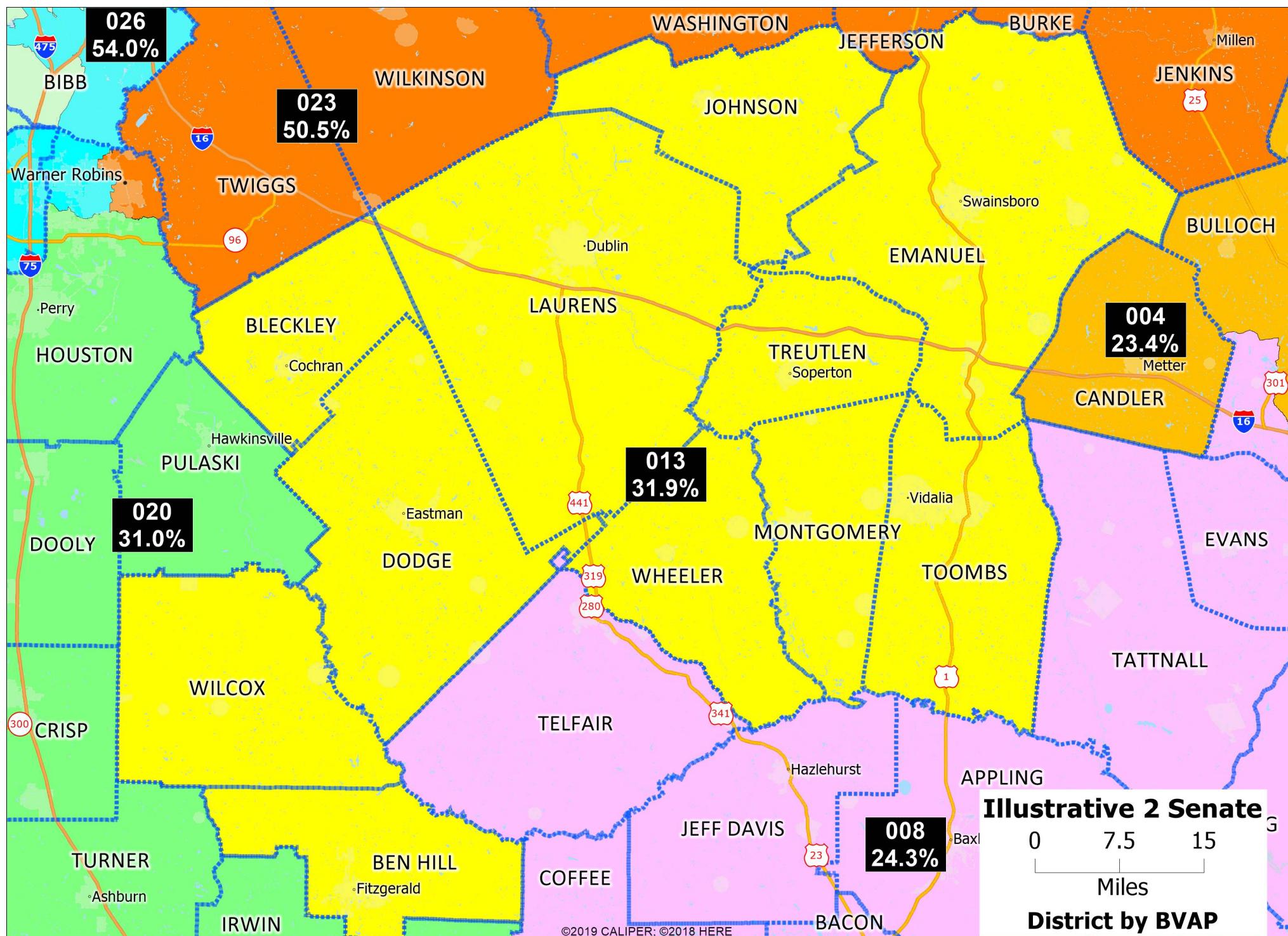


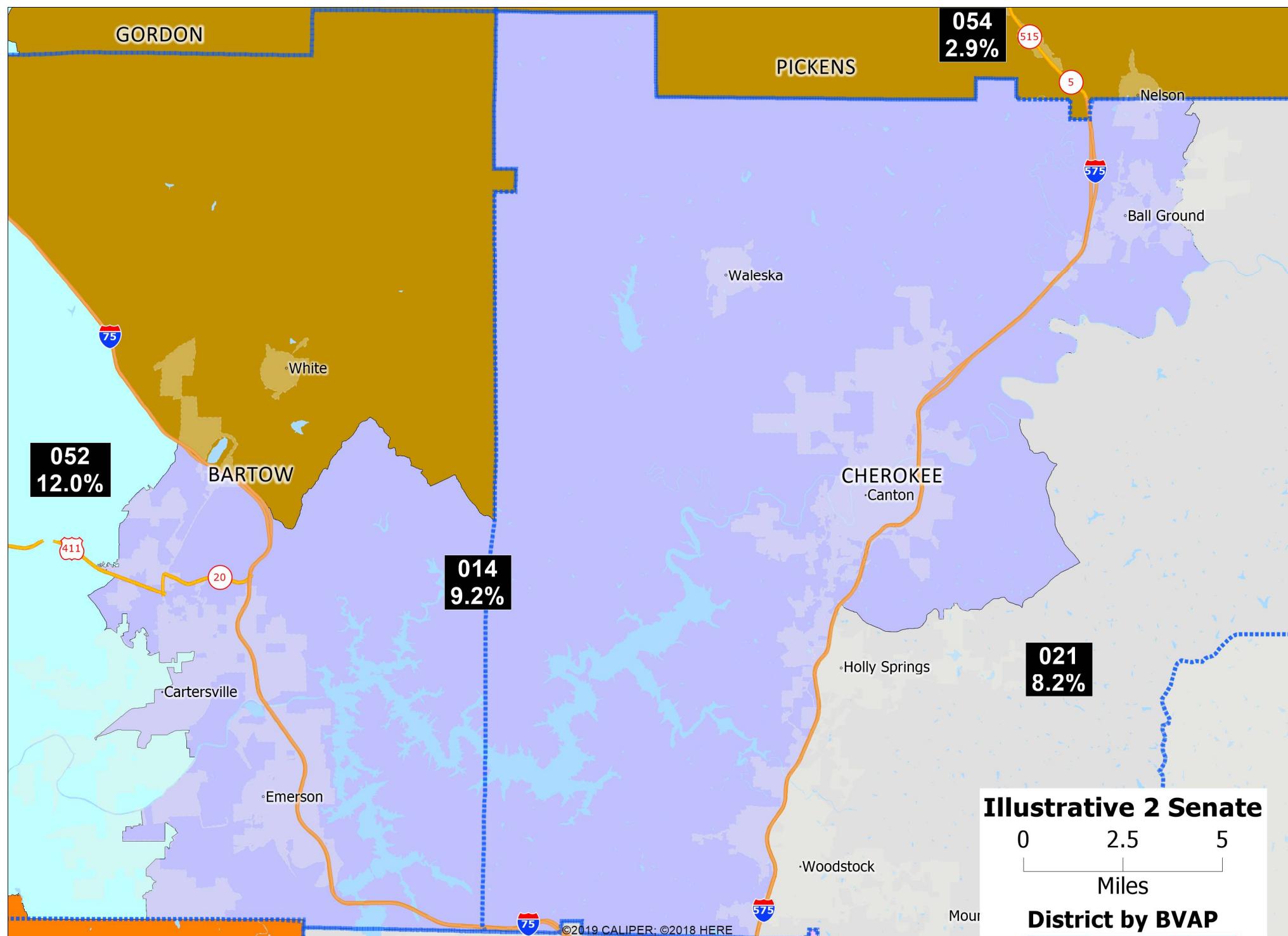


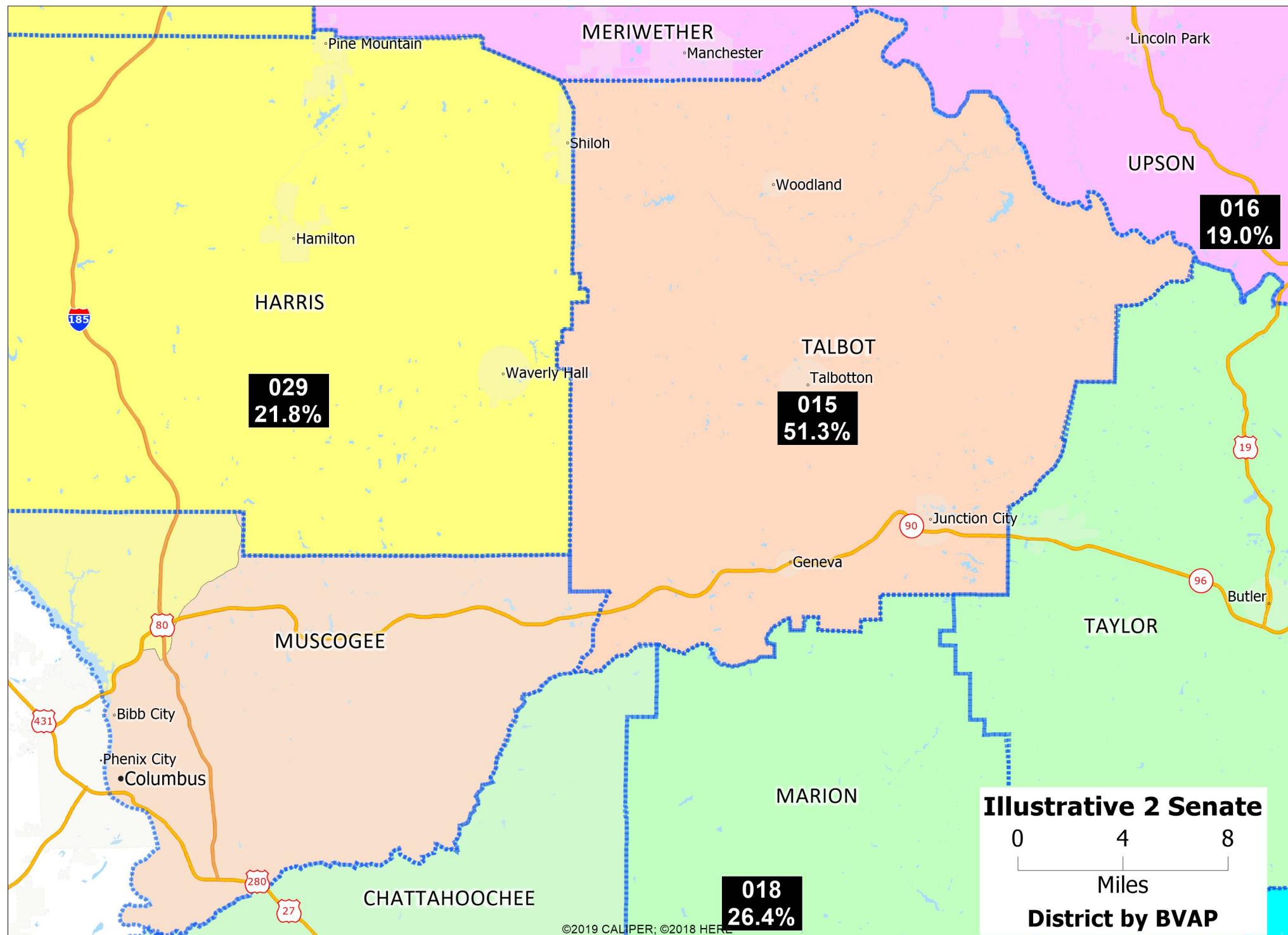


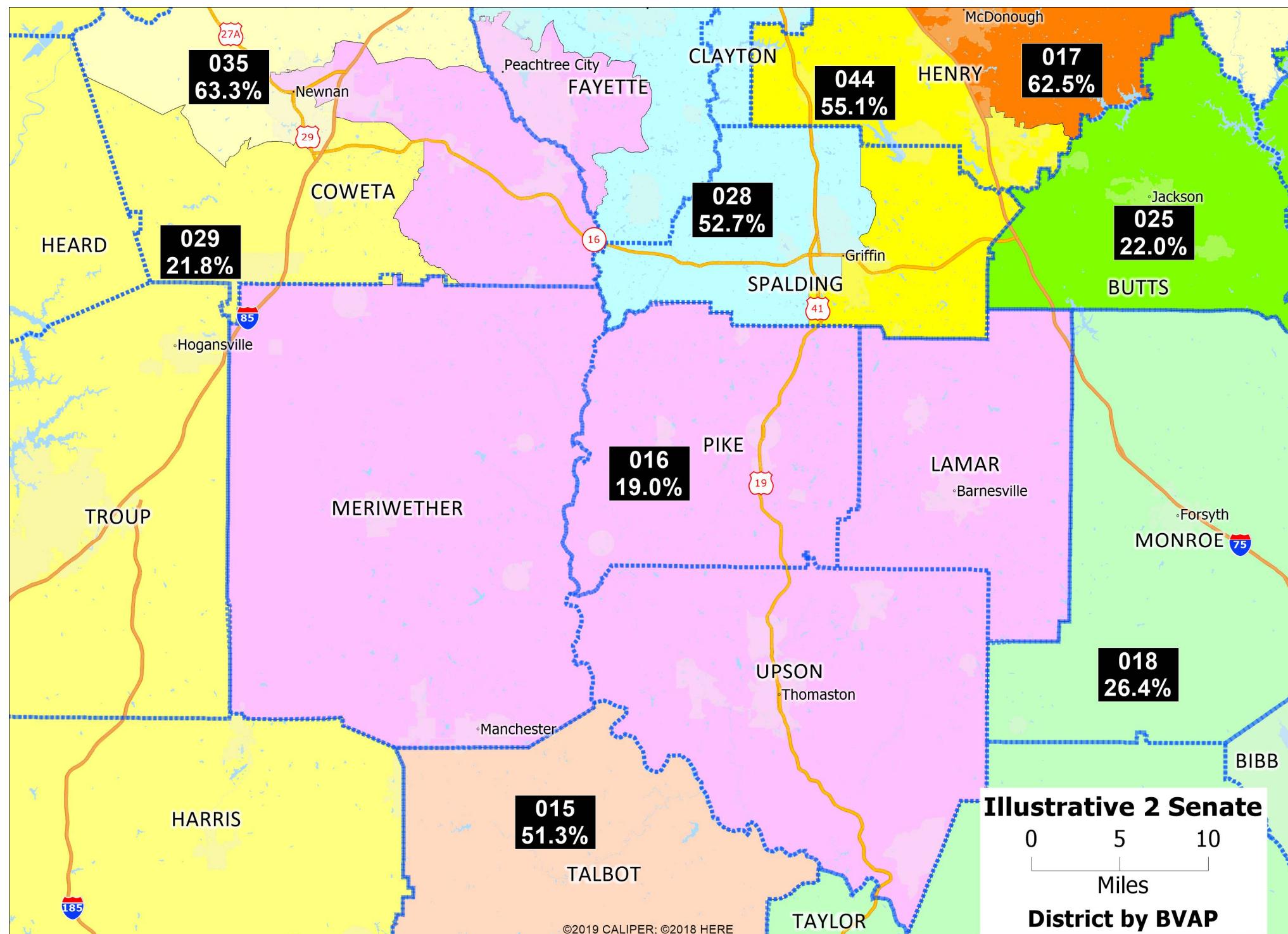


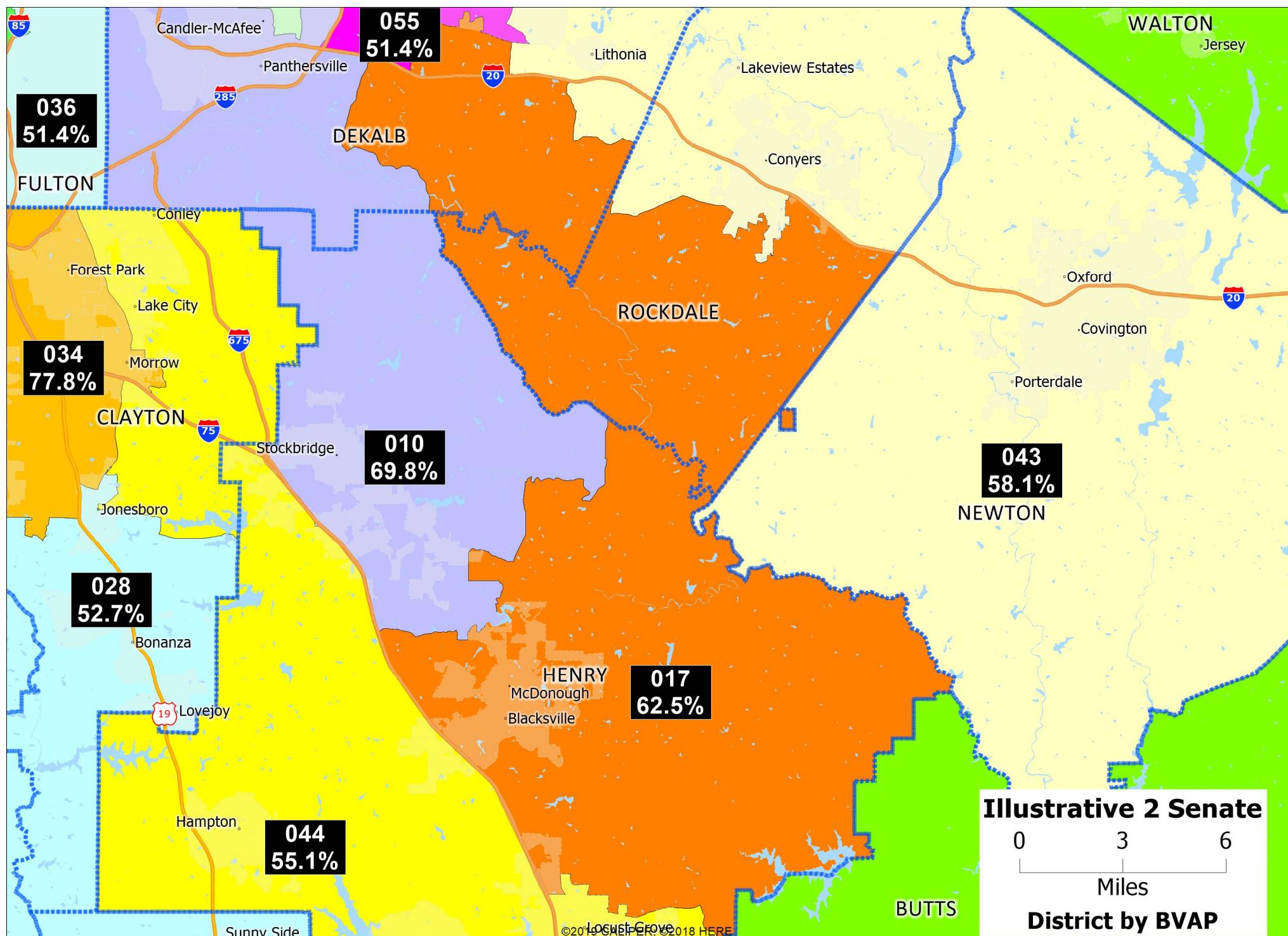


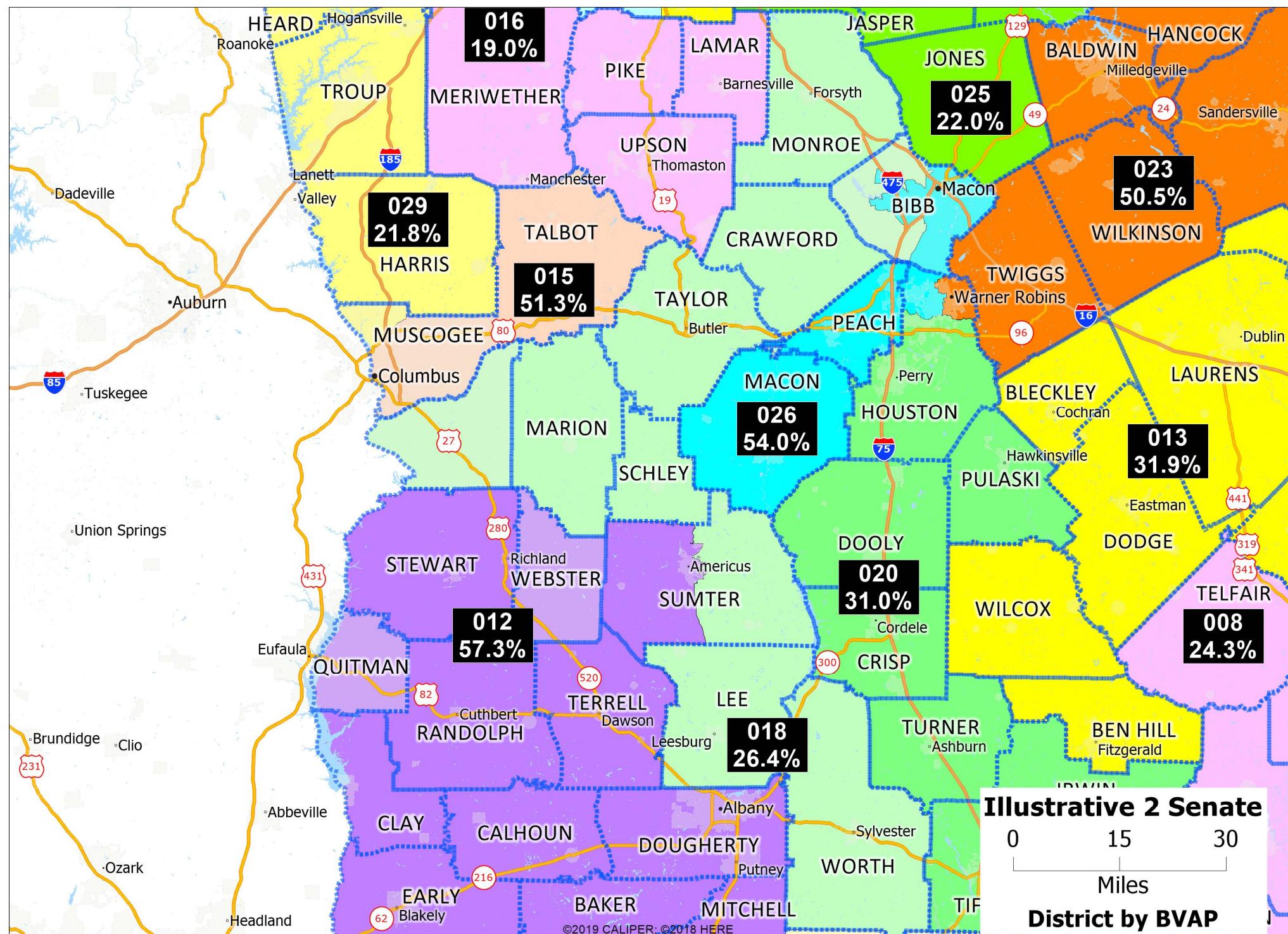


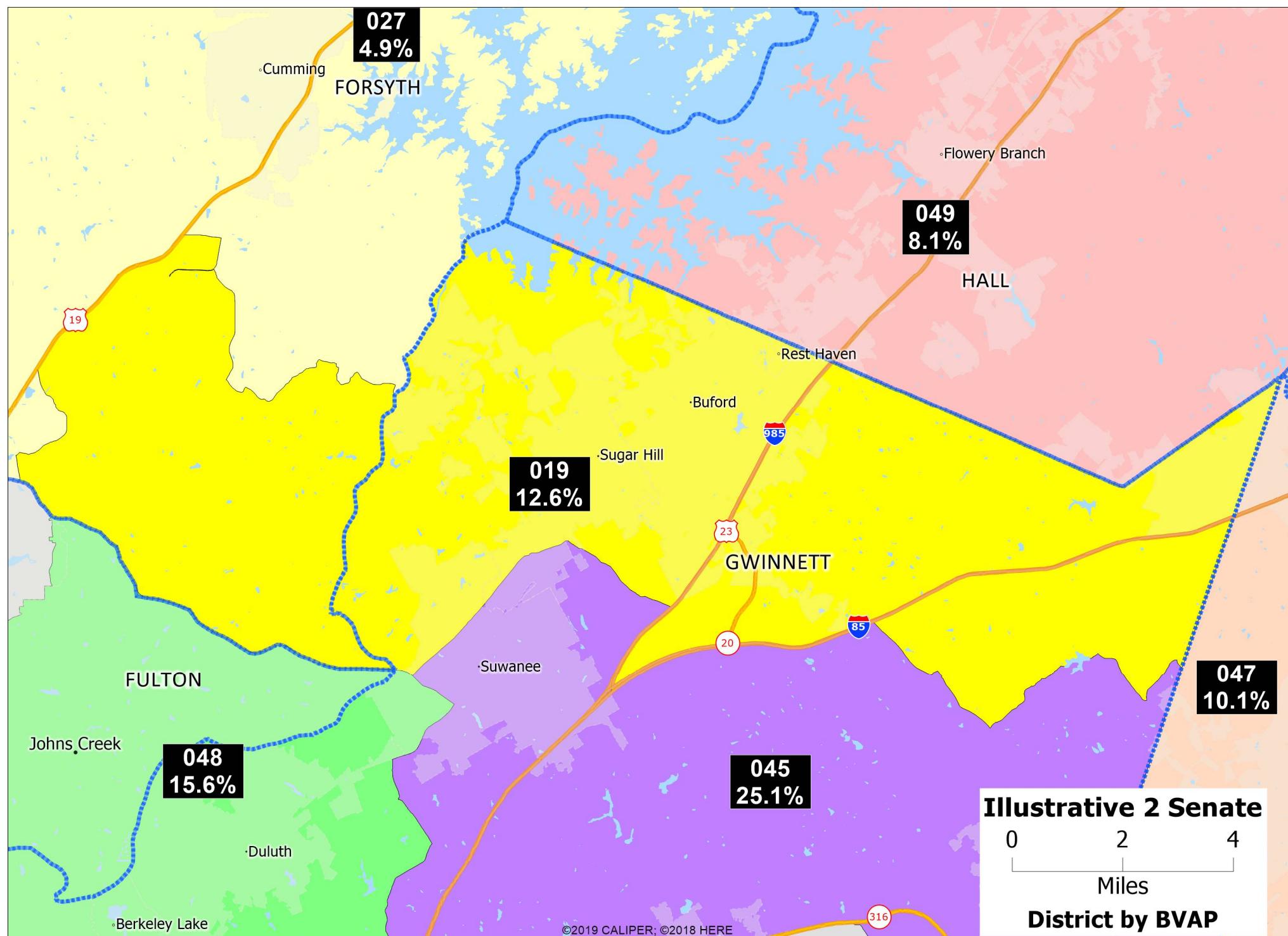


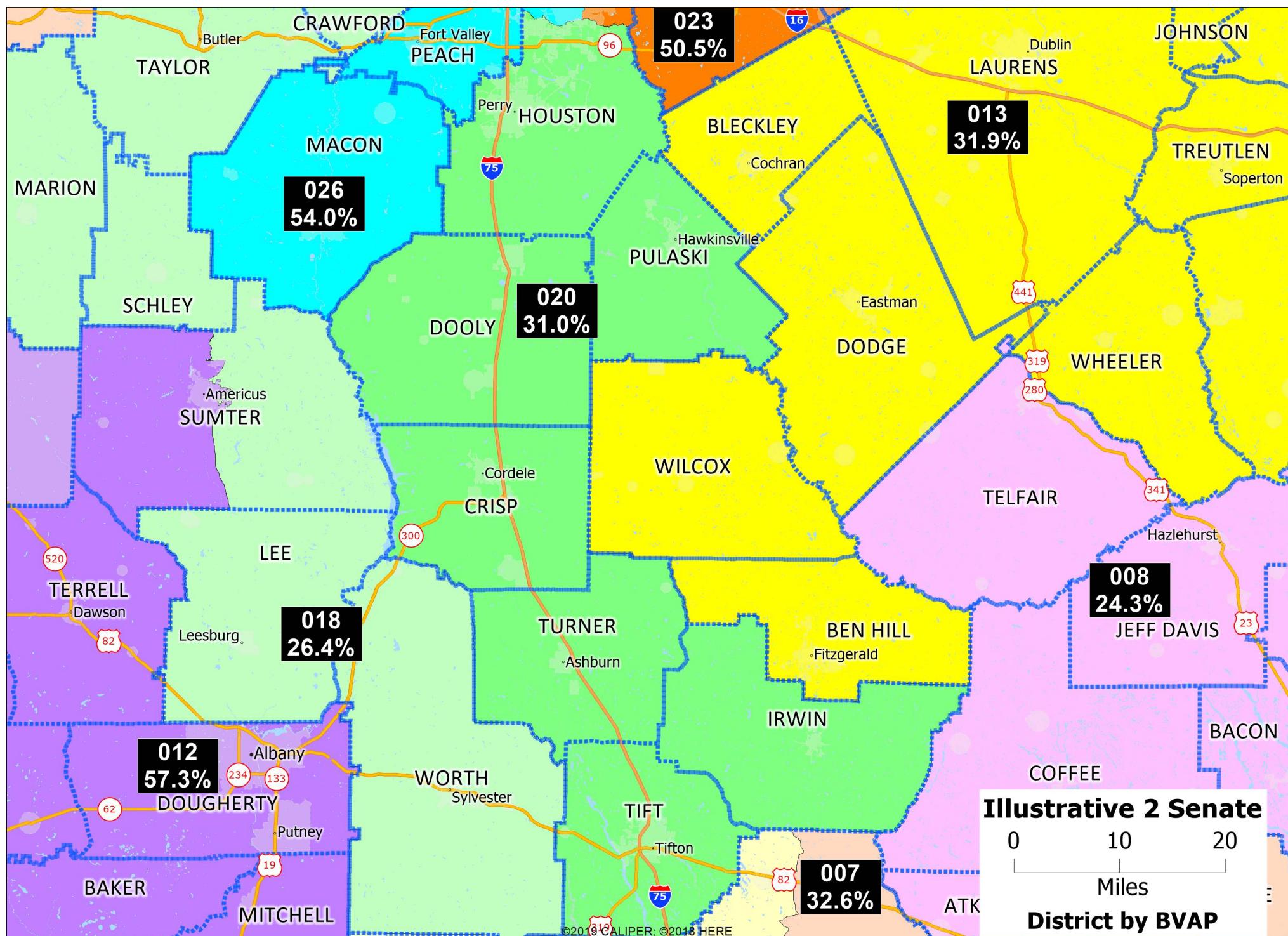


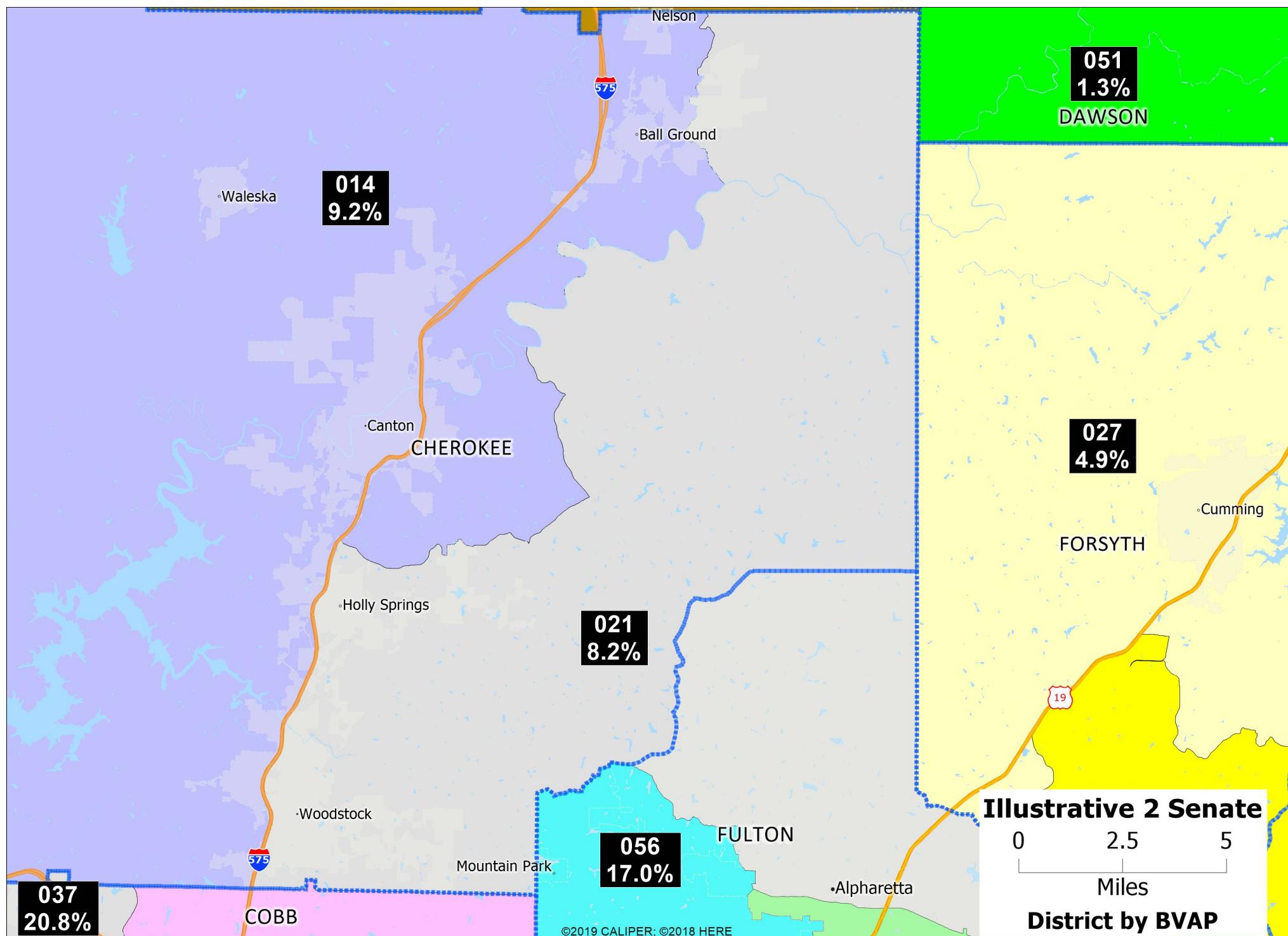


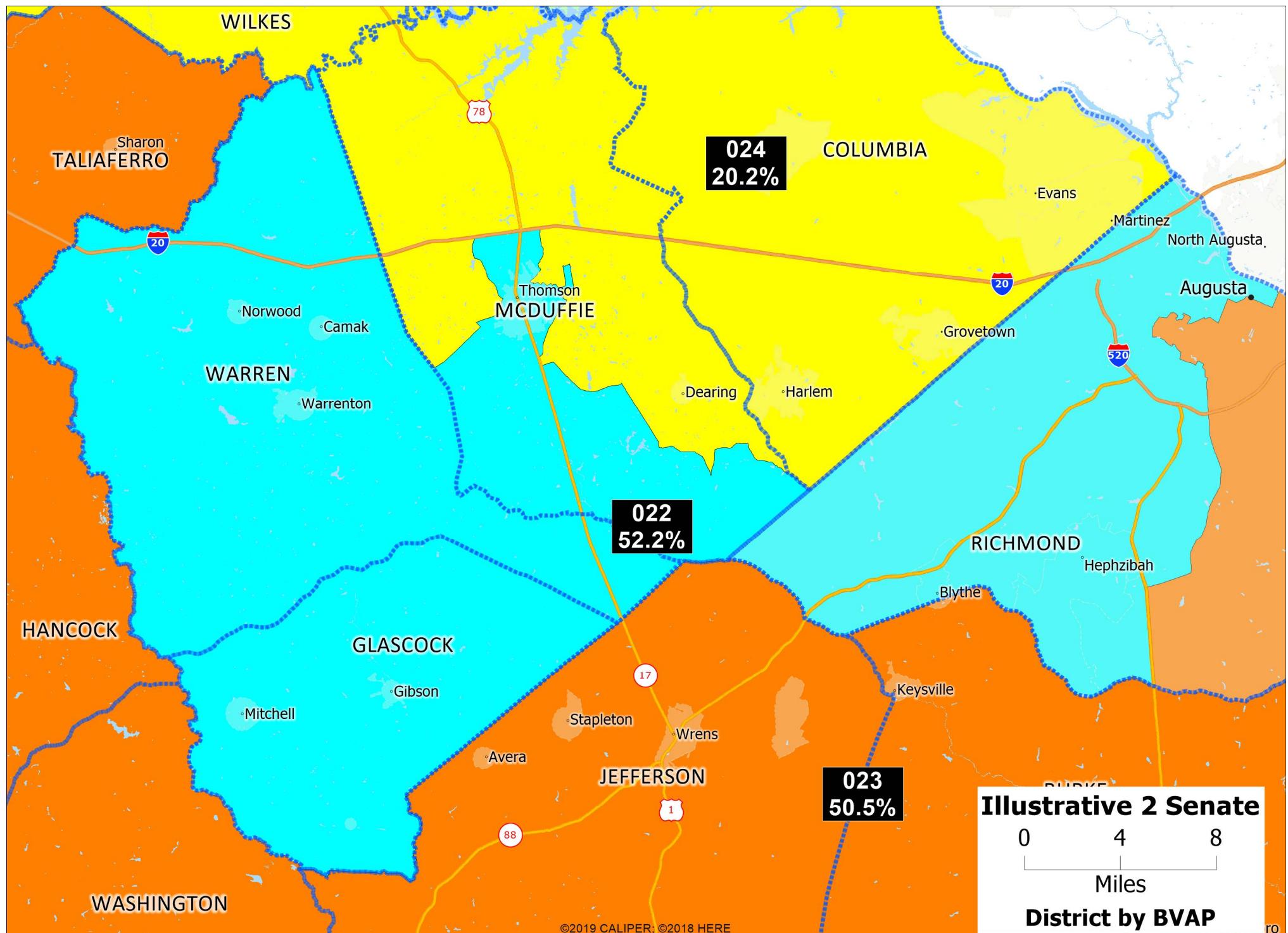


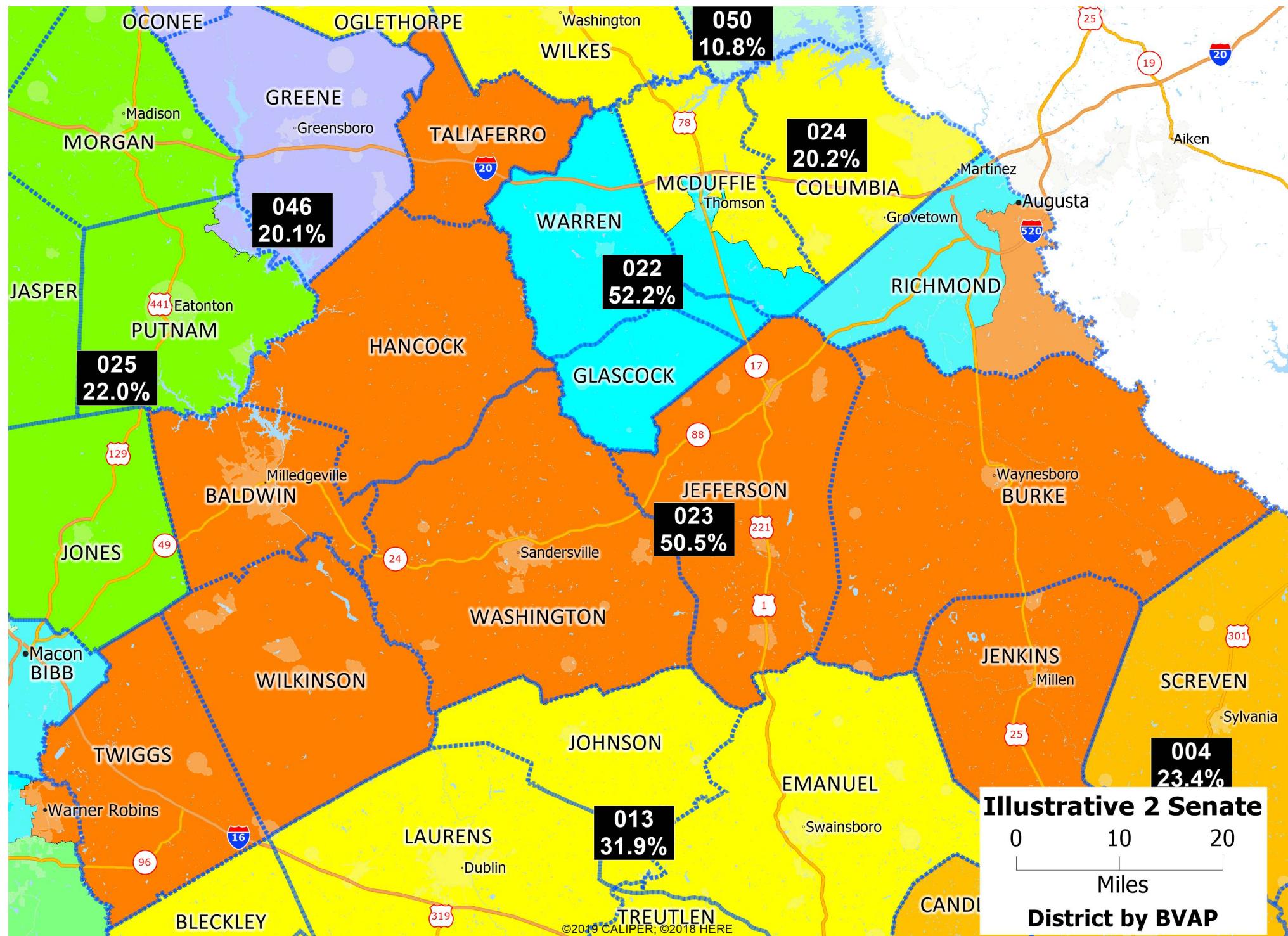


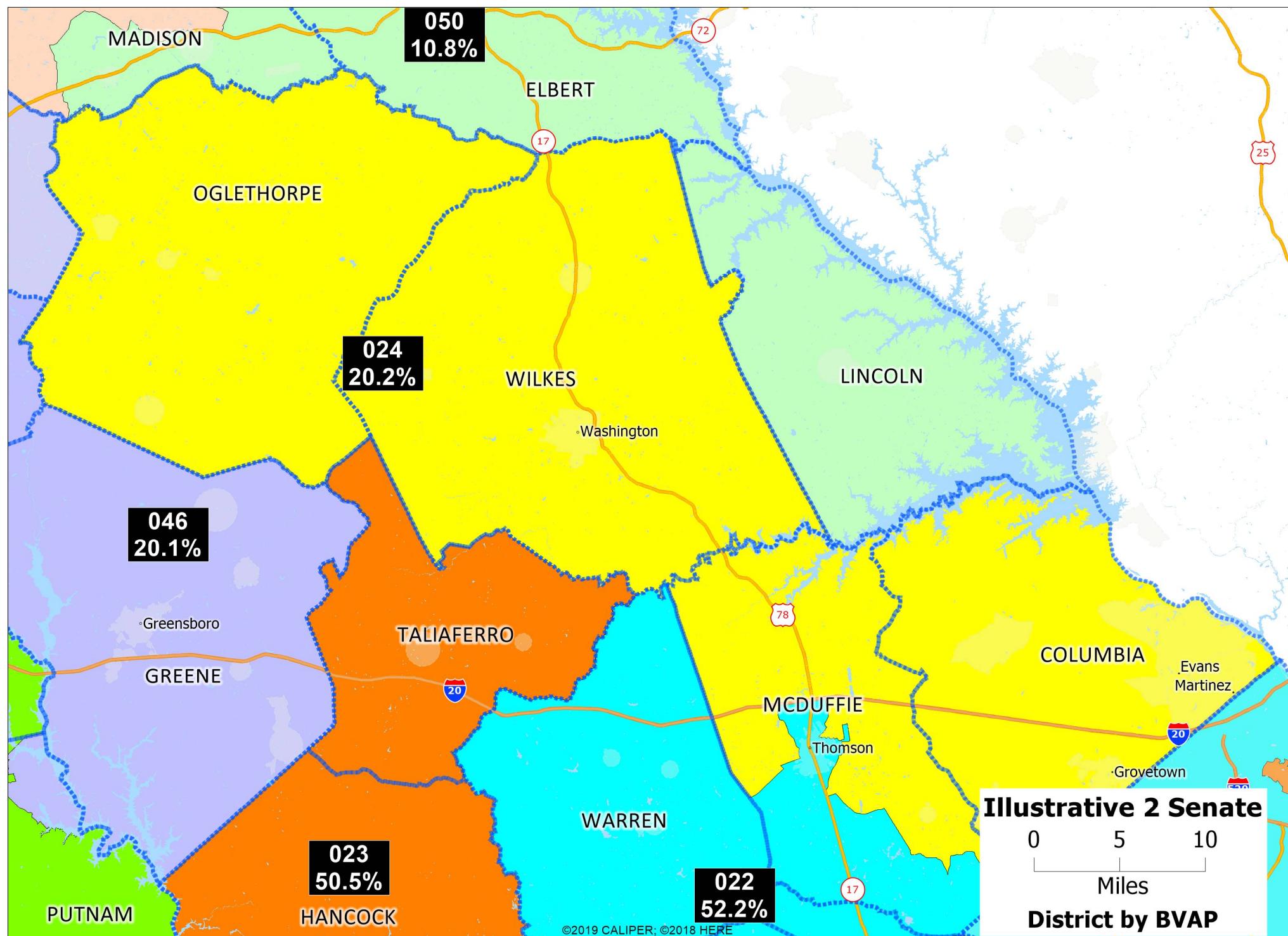


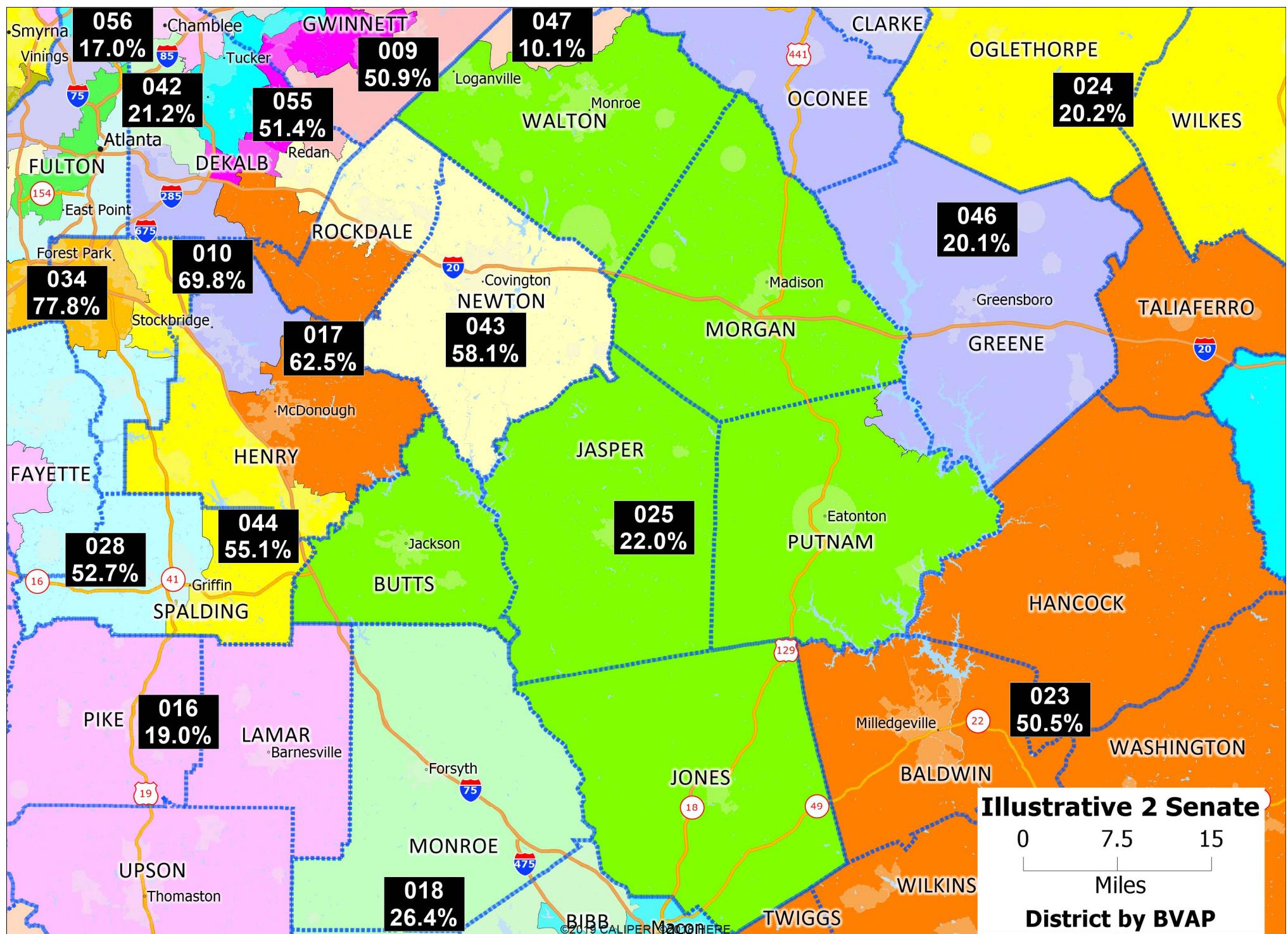


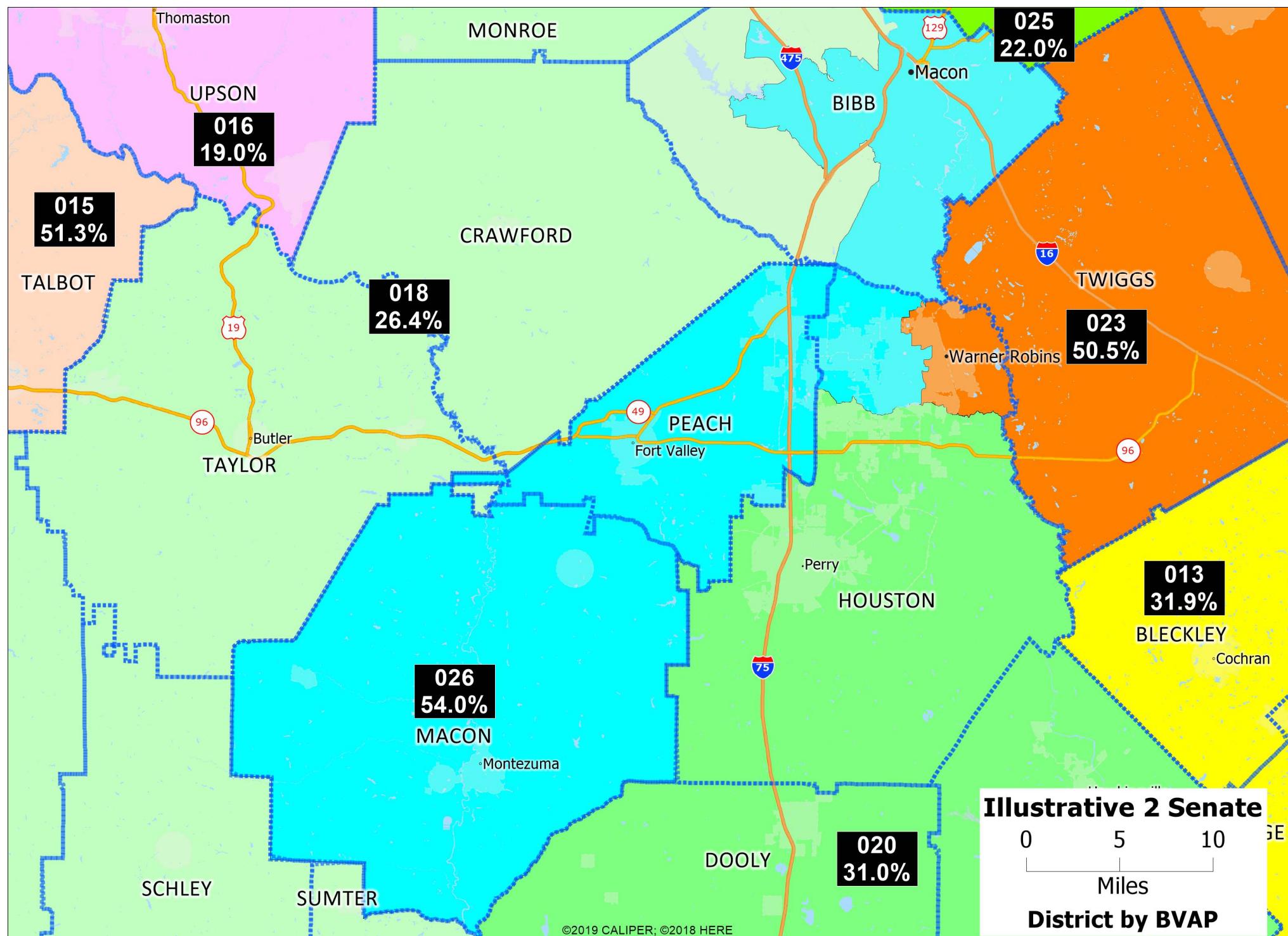


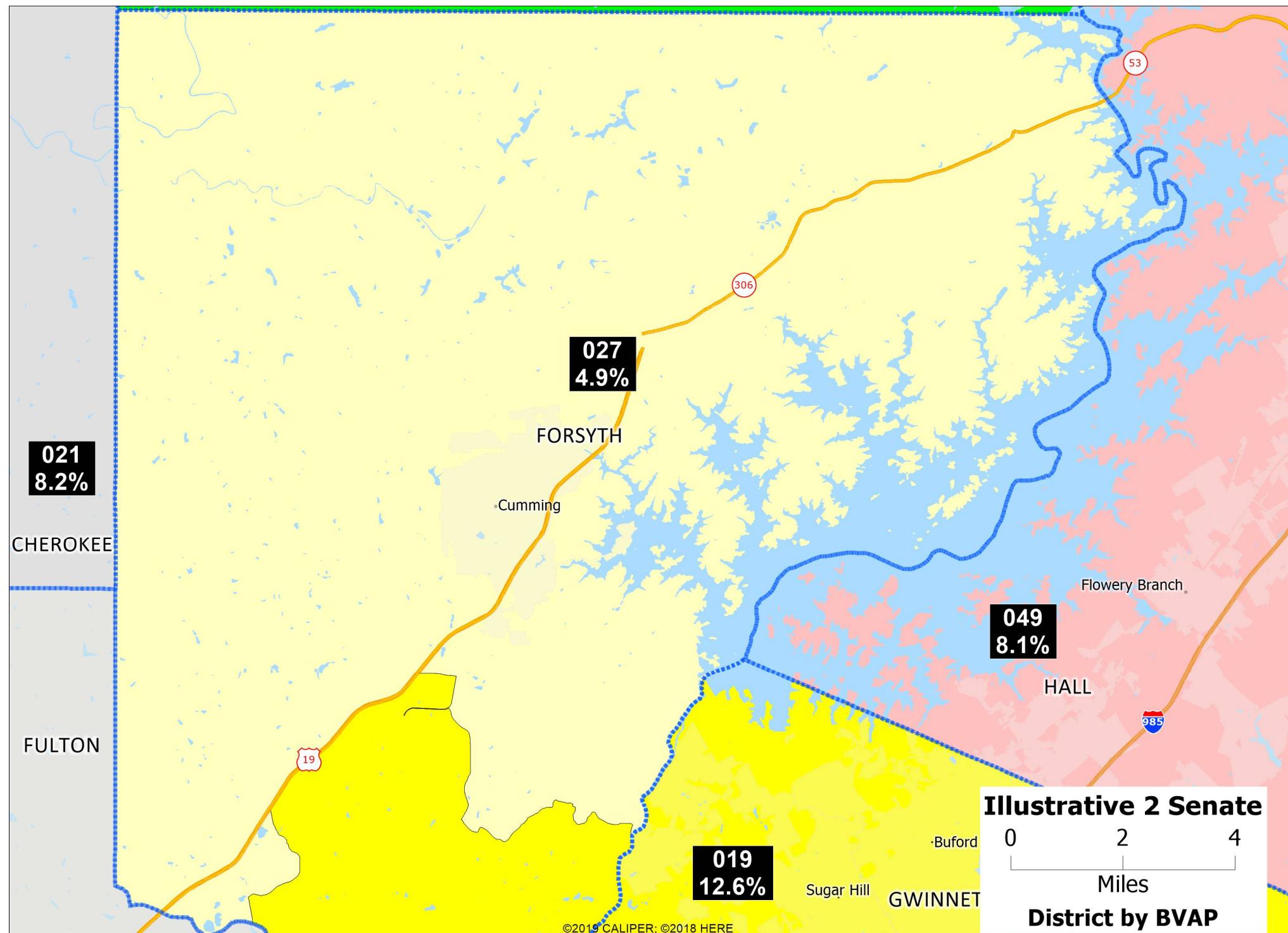












©2019 CALIPER; ©2018 HERE

